SAKET SHARMA

EMRS TGT LIBRARIAN 2025

TIER 1 PART IV- TEACHING APTITUDE

COMPREHENSIVE NOTES & SYLLABUS OVERVIEW FOR COMPETITIVE EXAMINATIONS

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Part–IV: Teaching Aptitude – Syllabus

Topic	Subtopics / Key Areas of Study
Teaching – Nature and Characteristics	Meaning and concept of teaching; Nature and scope of teaching; Characteristics and functions of teaching; Difference between teaching, training, and instruction.
Objectives and Basic Requirements of Teaching	Aims and objectives of teaching; Levels of teaching (memory, understanding, reflective); Conditions and requirements for effective teaching; Role of teacher and learner.
Learner's Characteristics	Types of learners; Individual differences; Cognitive, emotional, and social characteristics of learners; Motivation and learning styles.
Factors Affecting Teaching	Personal, social, psychological, and environmental factors; Teacher's personality and attitude; Classroom environment; Institutional support.
Methods of Teaching	Traditional and modern teaching methods; Lecture, discussion, demonstration, problem-solving, project, and ICT-based methods; Blended learning approach.
Teaching Aids	Types of teaching aids – audio, visual, and audio-visual; Importance and effective use of teaching aids; ICT tools in teaching-learning process.
Evaluation Systems	Concept and purpose of evaluation; Types of evaluation – formative and summative; Tools and techniques of evaluation; Feedback and assessment for learning.

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Nature of teaching: dual nature

Teaching has a **dual nature** — it is both a **science** and an **art**.
According to the Oxford Dictionary, teaching means *"to impart knowledge or skill, to give instruction, or to inspire with learning."*
In essence, **teaching is an activity that facilitates learning**, where the teacher acts as a **facilitator**, **guide**, and **mentor** who nurtures learners' intellectual and moral growth.
A teacher plays a crucial role in shaping not just the learner's knowledge but also their **physical, mental, emotional, social, and moral development**.

(1) Teaching as an Art

Elliot Eisner (1985), in *The Educational Imagination*, gave four reasons why teaching can be considered an **art**:

1. Teaching can be performed with such **skill and grace** that both teacher and learner experience beauty and satisfaction in the process.
2. Teacher's work is **dynamic**, not mechanical; it changes according to situations and learners' needs.
3. Teachers with an **aesthetic sense** bring creativity, imagination, and emotional richness to their lessons.
4. The **end of teaching is not fixed** — it evolves naturally during the process.

Hence, teaching as an art is:

- A source of **aesthetic experience**
- Based on **perception and control of qualities**
- A **heuristic** (learning-by-discovery) activity
- Focused on **emergent ends**, not pre-determined results

(2) Why Teaching is Considered an Art

Teaching is artistic because it involves **creativity, emotion, and personal touch**. Each teacher brings a **unique style** and **personality** into their teaching.

Key Points:

- Teachers teach according to their **aptitude, ability, and personality**.
- The process allows **freedom of expression** for both teacher and students.
- Teaching involves **aesthetic appeal** — beauty, presentation, and emotional connection.
- It accepts **criticism and creativity** as part of growth.
- The teacher's **voice, gestures, and expressions** enhance the experience.

(3) Five Examples to Understand "Teaching as an Art"

Example 1:
A science teacher explains the *structure of a flower*.
One teacher uses only textbook definitions, while another brings a real hibiscus flower, showing its beauty and explaining each part visually — creating aesthetic engagement.

Example 2:
An English teacher uses storytelling and expression to explain *poetry*, turning the class into a creative exploration instead of mechanical note-taking.

Example 3:
A history teacher dramatizes historical events — allowing students to feel like participants in the moment, rather than passive listeners.

Example 4:
A math teacher uses puzzles and real-life problems instead of formulas alone, encouraging curiosity and discovery.

Example 5:
An art teacher allows students to express emotions freely in their paintings, guiding them personally instead of imposing rigid rules — teaching through sensitivity and observation.

(4) Essence of Teaching as Art

- It has **a personal and humanistic approach**.
- Focuses on **individual expression** and **creativity**.
- Encourages **empathy, imagination, and flexibility**.
- Emphasizes **beauty, harmony, and joy in learning**.
- Involves both **teacher's talent** and **learner's engagement**.

(5) Teaching as a Science

Many educationists consider **teaching as a science** because it follows **systematic methods, logical reasoning, and planned execution**.
This scientific outlook emerged prominently in the **second half of the 20th century**, influenced by **Johann Friedrich Herbart** and his philosophy known as *Herbartism*.
According to this view, **teaching is a structured process**—based on objectives, measurable outcomes, and precise techniques.

(6) Characteristics of Teaching as a Science

1. **Systematic and Logical Process:**
   Teaching follows a well-structured plan. Lessons are organized step by step, from simple to complex.
2. **Pre-determined Objectives:**
   Learning goals are fixed in advance to ensure measurable changes in the learner's behavior and understanding.
3. **Use of Tools and Techniques:**
   Various teaching aids (charts, models, ICT tools, evaluation methods) are scientifically selected and applied for efficiency.
4. **Planned Strategies:**
   Lesson plans, evaluation methods, and feedback systems are all carefully designed before the class begins.

5. **Impersonal Nature:**
   The scientific approach emphasizes the *process* rather than the *personality* of the teacher. The focus stays on results and accuracy.

(7) Scientific Approach in Teaching

- Teaching content is arranged **logically and sequentially.**
- Teachers are **accountable** for students' learning outcomes.
- Activities are **pre-tested and evidence-based**, minimizing randomness.
- The process focuses on **cause and effect** — if the right method is used, the right result follows.
- Even time management is part of the system: learning has to occur within limited time frames.

(8) Five Examples to Understand "Teaching as a Science"

Example 6:
A math teacher uses a **lesson plan** with specific objectives, clear steps, and practice exercises. The focus is on measurable learning outcomes.

Example 7:
A science teacher follows the **5E model (Engage, Explore, Explain, Elaborate, Evaluate)** — each phase being methodical and evidence-based.

Example 8:
A language teacher evaluates grammar lessons using **diagnostic and achievement tests** to measure progress and adjust methods scientifically.

Example 9:
A social studies teacher uses **Bloom's Taxonomy** to design objectives — from knowledge recall to critical thinking.

Example 10:
A computer teacher applies **feedback loops** (pre-test → instruction → post-test) to check whether the intended learning outcomes are achieved.

(9) Essence of Teaching as a Science

- It is **planned, structured, and data-driven**.
- Relies on **observation, analysis, and feedback**.
- Focuses on **objectivity** rather than emotion.
- Encourages **accountability** in teaching results.
- Values **efficiency and precision** in instruction.

(10) Balance Between Art and Science

Teaching carries a **dual nature** — it must balance **creativity (art)** and **structure (science)**.
A good teacher blends **aesthetic engagement** with **systematic planning**, ensuring that learning is both **effective** and **enjoyable**.

When required, the teacher shifts roles — sometimes **creative and emotional (art)**, other times **logical and methodical (science)** — to fulfill the true purpose of education: **holistic development of the learner.**

(11) Teaching as a Morally Laden Activity

Teaching is not only an act of imparting knowledge — it is deeply **moral and value-based**.
From the earliest systems of education, **but character formation has also** been seen as one of the central aims of schooling (McClellan, 1999).
The teacher's role, therefore, extends beyond academic instruction to include **ethical guidance**, **moral development**, and **character building**.

(12) Moral Dimension in Teaching

Teaching is called a *morally laden profession* because:

- A teacher influences not just what learners know, but **who they become**.
- Every classroom interaction carries **ethical undertones** — fairness, empathy, respect, discipline.
- Teachers make moral choices daily: how to assess, how to respond to behavior, and how to model honesty and integrity.
- Society expects teachers to be **role models**, not merely information transmitters.
- Ignoring morality in teaching creates imbalance — focusing only on academics without nurturing values.

(13) Current Challenges

In today's world, teaching is often criticized as being **commercialized** or **detached from ethics**.
Remarks such as "teaching has become a business" or "teachers don't teach sincerely" reflect public concern about moral decline in education.
Many classrooms today focus solely on academic performance, sidelining **emotional and moral growth**.

Yet, **education without values is incomplete** — it produces informed minds but not responsible citizens.

(14) Five Examples to Understand "Teaching as a Morally Laden Activity"

Example 11:
A teacher notices a student cheating but chooses to discuss honesty and integrity privately rather than punish publicly — teaching moral reflection instead of fear.

Example 12:
In a group project, the teacher ensures every student participates equally, modeling **fairness and equality** in practice.

Example 13:
A literature teacher uses stories to discuss **moral dilemmas** like truth vs. loyalty, helping learners explore ethical choices.

Example 14:
A teacher includes lessons about **respecting diversity and empathy** during discussions on cultural or social topics.

Example 15:
A teacher organizes a **life-skills workshop** on topics like managing stress, resisting peer pressure, and handling emotions — nurturing emotional and moral resilience.

(15) Ways to Incorporate Morality in Teaching

1. **Teacher Training:**
   Moral awareness should be integrated during teacher education so that teachers model ethical behavior naturally.
2. **Curriculum Design:**
   The syllabus should include **value-based content** — not as separate lessons, but as part of every subject.
3. **Character Development as a Goal:**
   Teaching should aim to make **character building** one of the measurable learning outcomes.
4. **Classroom Culture:**
   Teachers should create a class environment based on **trust, respect, and cooperation**.
5. **Equal Opportunity:**
   Activities should encourage **unity, inclusiveness, and empathy**, ensuring all students feel valued.
6. **Handling Sensitive Issues:**
   Teachers must address learners' curiosity about **social and moral challenges** — such as attraction, drugs, stress, or abuse — through open and age-appropriate discussions.
7. **Life Skills and Workshops:**
   Regular sessions on **self-awareness, emotional intelligence, and ethical decision-making** help in moral growth.

(16) Essence of Teaching as a Moral Activity

- Teaching involves **cognitive (knowledge)**, **affective (emotion)**, and **psychomotor (action)** domains — but the **affective and moral** sides are often ignored.
- The teacher acts as a **moral compass** guiding learners toward empathy, honesty, responsibility, and respect.
- Education is not complete until it nurtures **values along with intellect**.
- NCERT's modern curriculum rightly integrates **value education** within content areas — linking knowledge with moral insight.

(17) Summary of Dual Nature of Teaching

Aspect	Description
Teaching as an Art	Creative, personal, emotional, aesthetic, and flexible.
Teaching as a Science	Systematic, logical, objective, and methodical.
Teaching as a Moral Activity	Ethical, value-driven, and focused on character formation.

A teacher's true success lies in blending **the precision of science**, **the imagination of art**, and **the conscience of morality** — so that learners not only *know more* but also *become better human beings.*

(18) Understanding the Connection

Teaching, learning, instruction, and pedagogy are not isolated terms — they are **deeply interrelated** and depend on one another for the educational process to succeed.
Each one plays a distinct yet complementary role:

- **Teaching** guides and facilitates.
- **Learning** transforms and adapts behavior.

- **Instruction** structures the process.
- **Pedagogy** binds them together as the *art and science of teaching*.

Together, they form the **core cycle of education** — a teacher instructs, a learner learns, and pedagogy defines how learning and teaching interact effectively.

What is Learning?

(19) Learning

Before exploring the interrelationship, it's vital to understand what *learning* actually means.

Some well-known definitions:

- **Thorndike:** "Learning is selecting the appropriate response and connecting it with the stimulus."
- **Guilford:** "Learning is the change in behaviour resulting from behaviour."
- **Garret:** "Learning is an organization of behaviour."
- **Skinner:** "Learning is a process of progressive behavioural adaptation."

Common Element:
All these definitions emphasize **"change in behaviour."**

Learning, therefore, is not mere memorization — it's a **process of change, adaptation, and growth** brought about through experience, reflection, and practice.

(20) Process of Learning (According to Dashiell)

Learning happens through several steps:

1. **Need or Desire Arises:** The learner feels a gap or curiosity.
2. **Motivation Develops:** The desire to fulfill that need pushes the learner forward.
3. **Objective Setting:** Clear goals are formed — "what to achieve."
4. **Activity or Action:** The learner becomes active, trying out new actions and reactions.
5. **Response Formation:** Correct actions or knowledge are identified and strengthened.
6. **Application and Mastery:** The learner applies learned behavior in new situations — leading to mastery.

This systematic process shows that **learning is active, purposeful, and continuous.**

(21) Interrelationship Explained

Teaching and **learning** are **two sides of the same coin.**
Teaching aims to bring about learning, and learning validates the effectiveness of teaching.
Instruction is the method or plan that connects the two, while **pedagogy** gives shape and meaning to the entire process.

Let's break it down:

- **Teaching** = The act of guiding and facilitating knowledge or skills.
- **Learning** = The internal process of understanding, adapting, and applying knowledge.

- **Instruction** = The structured design or strategy that organizes teaching (lesson plans, objectives, steps).
- **Pedagogy** = The philosophy, method, and rationale behind how teaching and learning occur.

(22) Five Examples to Understand the Interrelationship

Example 16:
A science teacher plans an experiment (instruction), demonstrates it (teaching), students perform and observe (learning), and the method used reflects **pedagogy** — hands-on experiential learning.

Example 17:
In language class, a teacher introduces new words through a story (teaching), students understand and use them in sentences (learning). The structured lesson plan (instruction) is guided by **pedagogical principles** like contextual learning.

Example 18:
A mathematics teacher uses **activity-based learning** — students use blocks to learn fractions. Teaching guides them, learning happens through doing, instruction gives sequence, and pedagogy is constructivist.

Example 19:
During group discussion on environmental issues, the teacher facilitates conversation (teaching), students share opinions (learning), the topic is pre-planned (instruction), and the approach reflects **collaborative pedagogy**.

Example 20:
An art teacher gives students freedom to express emotions through color. The moral and emotional dimension (pedagogy) blends with cognitive understanding (learning) under creative direction (teaching).

(23) Essence of Pedagogy

Pedagogy is the **integration point** of all three — teaching, learning, and instruction.
It includes:

- The **methods** (how to teach).
- The **strategies** (how to reach all learners).
- The **philosophy** (why this method suits these learners).

When a teacher uses **group discussions, individualized instruction, discovery learning, or activity-based methods**, these are all examples of **pedagogical approaches**.

(24) Core Understanding

- **Teaching** facilitates **learning**.
- **Learning** validates **teaching**.
- **Instruction** organizes the process.
- **Pedagogy** gives it theoretical and ethical depth.

All four must work together for education to achieve its ultimate goal — **the holistic development of the learner.**

(25) Instruction

Instruction refers to the **systematic process of delivering knowledge and skills** to learners through organized activities, strategies, and materials.
It is more **structured and procedural** compared to teaching and serves as the **practical application** of pedagogical principles within the classroom.

According to **Robert Gagné**, instruction should follow a specific sequence to ensure learning happens effectively.

(26) Gagné's Nine Events of Instruction

Gagné proposed nine instructional events that help structure effective learning experiences.
These steps create a bridge between *teaching (the act)* and *learning (the outcome)*.

1. **Gain Attention:**
   Arouse curiosity and focus (e.g., show a video, ask a question).
2. **Inform Learners of Objectives:**
   Tell students what they will learn and why it matters.
3. **Stimulate Recall of Prior Learning:**
   Connect new content with what learners already know.
4. **Present the Content:**
   Deliver information clearly using varied teaching aids.
5. **Provide Learning Guidance:**
   Offer examples, analogies, or hints to help understanding.
6. **Elicit Performance (Practice):**
   Allow learners to practice what they've learned.
7. **Provide Feedback:**
   Give immediate, constructive feedback.
8. **Assess Performance:**
   Evaluate learning through tests, assignments, or discussions.
9. **Enhance Retention and Transfer:**
   Encourage application of knowledge in new situations.

These steps ensure that **instruction is planned, interactive, and outcome-oriented**.

(27) Pedagogy and Its Relation with Teaching, Learning, and Instruction

Pedagogy is both the **theory and practice of teaching** — the art, science, and ethics behind how education happens.
It determines *how* teaching should be done for **complete learner development** — intellectual, social, emotional, and moral.

According to **John Dewey**,

"Pedagogy involves the organic relation between curriculum and teaching, and it entails study-based, socially just, and ethically sound practices resulting from negotiation among teacher, learner, and others."

This means pedagogy is not just a method — it's a **living process** involving interaction, reflection, and social responsibility.

(28) Herbart's Five Elements of Pedagogy

Philosopher **Johann Friedrich Herbart** viewed pedagogy as a scientific and moral discipline with a clear purpose: to develop learners into **ideal citizens**.
He proposed five key elements:

1. **Preparation** – Activating prior knowledge and setting the stage for new learning.
2. **Presentation** – Introducing new information in an understandable manner.
3. **Association** – Linking new ideas with previously learned concepts.
4. **Generalization** – Drawing broader principles or rules from examples.
5. **Application** – Applying learned concepts to real-life situations.

These steps integrate **teaching (the process)**, **instruction (the structure)**, and **learning (the outcome)** under one pedagogical framework.

(29) Components of Effective Pedagogy

Pedagogy begins the moment a teacher takes on the responsibility to teach. It involves:

i. **Teacher's Qualities:**
Personality, content knowledge, communication skills, attitude, and character.

ii. **Organization of Activities:**
Logical content arrangement, lesson planning, use of aids, and time management.

iii. **Dissemination of Content:**
Delivery through motivation, reinforcement, creative examples, and active interaction.

iv. **Evaluation of Learners:**
Continuous assessment — oral, written, or observational — to measure behavioral change.

Piaget, Bruner, and Vygotsky also contributed deeply to the *science of pedagogy*, emphasizing stages of cognitive development, discovery learning, and social constructivism respectively.

(30) Relationship Between Teaching, Learning, Instruction, and Pedagogy

As **Burton** said:

"Teaching is the stimulation, guidance, direction, and encouragement of learning."

This captures the entire interrelationship clearly:

- **Teaching** sets the direction — it **stimulates** learning.
- **Instruction** provides the **method** — systematic and organized steps for teaching.
- **Learning** is the **result** — a measurable change in knowledge, skill, or behavior.
- **Pedagogy** provides the **philosophy and rationale** — it governs how all three align for holistic development.

In essence:

- Teaching **starts the journey** (guiding the learner).
- Instruction **structures** the journey (planned delivery).

- Learning **completes** the journey (behavioral and cognitive growth).
- Pedagogy **shapes** the path (ethical, intellectual, and social direction).

(31) Five Examples to Understand the Interrelationship

Example 21:
A teacher designs a structured lesson (instruction) on photosynthesis, delivers it with questioning and experiments (teaching), students analyze and explain the process (learning), all guided by constructivist **pedagogy**.

Example 22:
A history teacher connects past events to present-day issues (pedagogy), explains causes and effects (teaching), assigns reflective essays (instruction), and students show understanding through debates (learning).

Example 23:
In a computer class, step-by-step coding exercises (instruction) are taught interactively (teaching). Learners apply logic to solve new problems (learning), based on **problem-solving pedagogy**.

Example 24:
A language teacher uses storytelling (teaching) supported by visuals (instructional aid) to improve vocabulary (learning), following **experiential pedagogy**.

Example 25:
A teacher uses collaborative projects (pedagogy) that require teamwork and peer learning. The planned tasks (instruction) enable students to learn cooperation (learning) under guided facilitation (teaching).

(32) Essence of the Interrelationship

- **Teaching** is *what the teacher does.*
- **Instruction** is *how the teacher organizes it.*
- **Learning** is *what happens in the learner.*
- **Pedagogy** is *the philosophy behind why and how it all fits together.*

When these four elements work in harmony, education fulfills its true purpose — **developing knowledgeable, skilled, and morally responsible individuals.**

Concepts related to teaching

Teaching is a **multi-dimensional activity** — it's not just about delivering content but about **how** that content is delivered, **how learners engage**, and **how the classroom environment supports** the process.
Its success depends on various factors like **teaching styles, methods, techniques, strategies, and classroom atmosphere**.
When these are blended wisely, teaching becomes effective, engaging, and transformative.

Teaching Styles

(33) Teaching Styles

Every teacher has a unique **teaching style**, shaped by personality, experience, training, and context.
A *teaching style* is the **distinct way a teacher delivers lessons**, manages the classroom, and interacts with learners.

Daniel K. Schneider defines teaching style as "the combination of strategies, methods, and rhetoric a teacher employs."
Galton sees it as "a set of teaching tactics."

In simple words, teaching style reflects *how* a teacher communicates, organizes, and engages in the classroom.

(34) Factors Influencing Teaching Style

A teacher's style is not fixed — it changes with circumstances.
Several factors determine it, such as:

- **Personal factors:** personality, confidence, communication skill.
- **Professional factors:** training, experience, educational philosophy.
- **Knowledge factors:** subject expertise and mastery.
- **Curricular factors:** nature of content and learning objectives.
- **Institutional factors:** policies, environment, infrastructure.
- **Career-stage factors:** novice teachers vs. experienced educators often differ in style.

Thus, there's **no single "perfect" style** — effective teachers blend different approaches depending on learners' needs.

(35) Thornton B. Paul (2013): Three Basic Teaching Styles

Thornton identified **three primary teaching styles**:

(a) The Directing Style

- Based on **instructional control** and **teacher-centered methods**.
- The teacher **guides** learners step by step and ensures they follow instructions precisely.
- Common methods: *lecture, demonstration, lecture-cum-demonstration, audiovisual presentation, reading, writing.*
- It's **traditional**, yet effective when structure and accuracy are needed.

Example 26: A physics teacher explains "Newton's Laws" using a lecture and demonstration, ensuring all students follow the experiment correctly.

(b) The Discussing Style

- Focuses on **interaction and critical thinking**.
- The teacher acts as a **facilitator**, encouraging open discussion, debate, and reasoning.
- Learners get freedom to express views while maintaining logical flow.
- Enhances **communication, reasoning, and creativity**.

Example 27: In a social studies class, students discuss "democracy vs. monarchy," with the teacher guiding and questioning for deeper understanding.

(c) The Delegating Style

- Promotes **independent and self-directed learning**.

- The teacher **assigns tasks or projects** and gives students authority to plan and execute them.
- Encourages **responsibility, confidence, and autonomy**.
- The teacher acts as a **mentor** or **advisor**, intervening only when necessary.

Example 28: A teacher assigns a project on "renewable energy." Students independently research, create models, and present results, while the teacher observes and supports.

(36) Suggestions for Adopting an Effective Teaching Style

To make teaching more powerful and inclusive, a teacher should follow certain principles:

1. **Clarity, Conciseness, and Comprehensiveness (Triple C):**
   Teaching should be clear, precise, and complete — no confusion or unnecessary complexity.
2. **Confidence and Preparedness:**
   Teachers must have strong content knowledge and be ready for unexpected questions or classroom situations.
3. **Fairness and Equality:**
   Every student deserves equal attention and opportunity to participate.
4. **Adaptability:**
   Adjust teaching style according to student needs, content type, and classroom environment.
5. **Engagement and Motivation:**
   Create interest through visuals, stories, activities, or questioning techniques.
6. **Continuous Reflection:**
   A teacher should constantly analyze their own performance — what works, what doesn't — and improve.

(37) Five Examples of Teaching Styles in Action

Example 29:
An English teacher combines *directing* (grammar explanation), *discussing* (debating about themes), and *delegating* (writing essays) — blending styles for better learning.

Example 30:
A biology teacher explains *photosynthesis* using a lecture (directing), then asks students to relate it to daily life through discussion (discussing).

Example 31:
A history teacher assigns group presentations on historical figures, giving students autonomy (delegating), while guiding structure (directing).

Example 32:
A computer teacher demonstrates a coding exercise (directing), lets students modify it (discussing), and finally assigns them to build a mini-project (delegating).

Example 33:
An art teacher encourages students to choose their own themes for a painting competition, guiding only when needed — a strong **delegating style** example.

(38) Essence of Teaching Style

- Teaching style is an **individualized talent**, not a formula.
- No single style suits all learners or subjects.
- Effective teachers are **adaptive, creative, and reflective**.
- The ultimate goal is to make learning **clear, participative, and meaningful**.

In short —

"A good teacher doesn't stick to one style; they orchestrate many — like a conductor guiding a symphony of minds."

Teaching Models

"School faculties and individual teachers create life in schools by models of teaching they choose and create." – *Bruce Joyce*

Teaching models act as **blueprints** for instruction — they provide a **systematic framework** to guide how teaching and learning unfold in the classroom.
Just as an architect designs a plan before building, a teacher uses a model to design how learning will occur, ensuring both **clarity** and **purpose**.

(39) Meaning of Teaching Models

A **teaching model** is a **structured plan or pattern** that helps the teacher organize teaching experiences effectively to achieve specific objectives.
It offers **a scientific and philosophical approach** to classroom teaching, ensuring that learning outcomes are achieved systematically and meaningfully.

According to **Paul D. Eggen**,

"Models are prescriptive teaching strategies designed to accomplish particular instructional goals."

In short, teaching models are **pre-designed frameworks** that tell teachers *what to do, how to do it, and in what sequence*, to ensure learning is engaging and successful.

(40) Features of a Good Teaching Model

A good teaching model isn't rigid; it must be flexible, learner-centered, and goal-oriented.

Essential features include:

1. **Interactive Nature:**
   It should involve active participation of both teacher and learners.
2. **Improves Performance:**
   It should enhance learning outcomes and teaching effectiveness.
3. **Philosophical and Psychological Foundation:**
   A sound model rests on educational theories and learning psychology.
4. **Content Compatibility:**
   The model must suit the subject matter and learning objectives.
5. **Engagement and Motivation:**
   It should create a stimulating classroom atmosphere.

6. **Promotes Creativity:**
   It should encourage innovation among both teachers and students.
7. **Behavioral Change:**
   The ultimate aim should be to bring about positive changes in learner behavior.
8. **Assessment and Feedback:**
   It should include means to identify learner strengths, weaknesses, and areas for improvement.

(41) Fundamentals of Teaching Models

Every teaching model is built on certain **fundamental components**, which determine how it functions in a classroom setting.

i. **Focus:**
The central aim or main objective around which the model is designed.
Example 34: The "Concept Attainment Model" focuses on developing analytical thinking.

ii. **Syntax:**
The *sequence or structure* of steps followed in the model.
Example 35: In "Inquiry Training Model," steps include encountering a problem, collecting data, and verifying hypotheses.

iii. **Principle of Sensation:**
Emphasizes *stimulus–response* — creating mutual engagement between teacher and learner.
Example 36: Using questioning and feedback loops during teaching to maintain learner alertness.

iv. **Social System:**
Defines the relationship and interaction between teacher and learners.
It should help prepare students for **social life and cooperation**.
Example 37: In "Role Playing Model," learners interact and share responsibilities, mirroring social situations.

v. **Support System:**
Includes all resources (teaching aids, technology, references) that enhance the teaching-learning process.
Example 38: Using ICT tools, visuals, or real-life materials to support the learning activity.

vi. **Application Perspective:**
Refers to how and where the model is best applied — depending on content, learner level, and objectives.
Example 39: "Advance Organizer Model" is best applied before introducing new, complex information to build readiness.

(42) Five Examples to Understand Teaching Models

Example 40:
In a science lesson, a teacher uses the **Inquiry Training Model** to encourage students to think like scientists — observing, hypothesizing, and verifying results.

Example 41:
In a social studies class, the **Role Playing Model** is used — students act out community issues to develop empathy and social understanding.

Example 42:
A teacher uses the **Concept Attainment Model** to help students identify what makes an "ecosystem" by comparing examples and non-examples.

Example 43:
In a math class, the **Inductive Thinking Model** allows students to discover formulas by observing patterns, instead of direct instruction.

Example 44:
The **Advance Organizer Model** is used before teaching "photosynthesis," helping students connect prior knowledge with new content through a concept map.

(43) Essence of Teaching Models

Teaching models act as **maps** — they provide direction but allow flexibility.
They integrate **teaching styles, instructional steps, and pedagogical philosophy** into one coherent design.

A good teacher:

- Chooses the right model according to learner needs and subject content.
- Blends creativity (art) with structure (science).
- Uses the model not as a formula but as a **guide for meaningful learning**.

In essence:

"Teaching models translate educational theory into classroom reality — turning abstract ideas into concrete learning experiences."

Types of Teaching Models

Teaching models are frameworks that guide teachers in structuring, delivering, and assessing learning. According to educational theorists like **Bruce Joyce** and **Marsha Weil**, teaching models can be grouped into **four broad categories** based on their focus and purpose:

1. **Social Interaction Models**
2. **Behaviour Altering Models**
3. **Information Development Models**
4. **Personal Basis Models**

Each model reflects a different **philosophy of education**, showing how teaching can nurture intellectual, social, and emotional growth.

(44) 1. Social Interaction Model

This model emphasizes **learning through social relationships and cooperation**.
It focuses on **group participation, communication, empathy, and teamwork** — helping students learn to live and work with others.

Main Models Under This Category:

1. **Group Investigation Model** – *John Dewey and Herbert Thelen*
    - Encourages group work on social or academic problems.
    - Learners investigate, discuss, and present findings collaboratively.
      Example 45: Students form teams to study "climate change" — dividing tasks, gathering data, and sharing conclusions.

2. **Social Inquiry Model** – *Benjamin Cox and Byron*
    - Encourages inquiry into **human and social issues** using data and reasoning.
      Example 46: Students analyze "child labor" using survey data, reports, and interviews.
3. **Laboratory Model** – *Used in science and biology education*
    - Focuses on **experimentation and discovery** through lab activities.
      Example 47: Learners conduct experiments on "germination" to understand biological processes firsthand.

Core Idea:

Learning happens best through *interaction, cooperation,* and *shared inquiry*.

(45) 2. Behaviour Altering Model

This model is grounded in **behavioral psychology**, especially **B.F. Skinner's** theory of conditioning.
It aims to bring about **observable and measurable behavioral changes** through reinforcement, practice, and feedback.

Main Models Under This Category:

1. **Direct Model**
    - Teacher-centered and structured.
    - The teacher guides the class step-by-step, ensuring mastery.
      Example 48: A math teacher demonstrates problem-solving steps and monitors practice exercises.
2. **Programmed Instruction Model** – *B.F. Skinner*
    - Uses **Computer-Assisted Instruction (CAI)** or self-paced modules.
    - Learners progress after giving correct responses.
      Example 49: Students learn typing skills using interactive computer software.
3. **Practice-Based Model**
    - Teaching occurs through guided practice, feedback, and remedial support.
      Example 50: After teaching grammar rules, the teacher gives exercises, checks errors, and provides corrective practice.

Core Idea:

Learning occurs through *repetition, feedback,* and *reinforcement.*

(46) 3. Information Development Model

This category focuses on **cognitive growth** — how learners process, organize, and use information.
It draws heavily from **cognitive psychology** and the works of **Gagné, Bruner, and Schuman**.

Main Models Under This Category:

1. **Gagné's Model**
    - Focuses on **stages of information processing** — attention, perception, memory, and retention.

Example 51: A teacher uses visual aids and questioning to activate prior knowledge before introducing new material.

2. **Bruner's Model**
    - Based on **discovery learning** — learners classify and relate concepts logically.
      Example 52: Students group geometric shapes to infer definitions of polygons.
3. **Schuman's Model**
    - Based on **scientific inquiry** and problem-solving strategies.
    - Encourages learners to act like scientists — form hypotheses, test, and conclude.
      Example 53: Students investigate "water pollution" through hypothesis and data analysis.

(47) 4. Personal Basis Model

These models emphasize **self-awareness, creativity, and emotional development.**
They see learning as a **personal and humanistic experience**, not just intellectual training.

Main Models Under This Category:

1. **Non-Directive Model** – *Carl Rogers*
    - Promotes **empathy and freedom** in learning.
    - The teacher acts as a **facilitator**, not an authority.
      Example 54: Students discuss their feelings about peer pressure, while the teacher listens and supports.
2. **Self-Awareness Model** – *Fritz Perls and W. Schutz*
    - Encourages learners to **understand themselves and others**, discovering inner potential.
      Example 55: Reflective activities like journaling or group sharing help students explore emotions and strengths.
3. **Creative Model** – *William Gordon*
    - Based on **learning by doing** — emphasizes creativity, innovation, and independence.
      Example 56: Students design their own community project or art exhibition with minimal teacher guidance.

Core Idea:

Education is not just about knowledge — it's about *self-discovery, emotional growth,* and *creativity.*

(48) Essence of Teaching Models

All four types of teaching models complement each other.
Each one serves a different educational purpose:

- **Social Interaction Models:** Build cooperation and empathy.
- **Behaviour Altering Models:** Shape habits and discipline.
- **Information Development Models:** Strengthen thinking and understanding.
- **Personal Basis Models:** Foster individuality and creativity.

A skilled teacher **blends models** — using different approaches for different lessons, learners, and objectives.

“Teaching models are not recipes — they are instruments. The teacher’s wisdom lies in knowing when and how to play them.”

Teaching Methods and Approaches

Teaching methods and approaches are the **heart of the teaching-learning process**.
They decide *how* knowledge will be delivered, *how* learners will interact with it, and *how* outcomes will be achieved.
A skilled teacher must choose methods and approaches wisely — depending on **learner level, subject, objectives, and resources available**.

(49) Meaning of Approach and Method

An **approach** is a broad, philosophical framework — a *general plan of action* to deal with a particular learning problem.
A **method**, on the other hand, is the *systematic procedure* or *practical application* of that approach in the classroom.

As stated by **IGNOU (2009)**:

“An approach is a comprehensive way of dealing with a particular problem, while a method is the orderly and logical arrangement of ideas based on that approach.”

In short:

- **Approach** = “Why” and “What” to teach.
- **Method** = “How” to teach.

Common Teaching Methods

(50) Common Teaching Methods

Different subjects, learners, and contexts require different methods.
Below are the most widely used methods with their key features and examples.

(1) Lecture Method

- A **teacher-centered** method — the teacher explains concepts while learners listen and take notes.
- Best suited for **higher classes** or when the syllabus is vast.
- Needs to be made engaging with examples, anecdotes, visuals, and humor.

Example 57:
A history teacher narrates the events of the 1857 revolt using stories and maps to maintain student interest.

Limitations: Can become monotonous if overused.

(2) Demonstration Method

- Commonly used in **science and mathematics** teaching.
- Learners observe while the teacher demonstrates experiments or procedures.
- Strength: Involves **visual and auditory senses**, making learning concrete.
- Limitation: Students often don’t get hands-on experience.

Example 58:
A teacher shows the reaction between vinegar and baking soda but doesn't allow students to try it — limiting active participation.

(3) Lecture-cum-Demonstration Method

- A **blend of both lecture and demonstration**, making teaching more effective.
- Teacher explains while showing real examples or models.

Example 59:
To explain *levers*, a science teacher brings scissors, tongs, and pliers, demonstrating their types while explaining.

(4) Heuristic / Discovery Method

- *Heuristic* means "to find out."
- Learners explore, discover facts, and reach conclusions on their own with the teacher as a **guide**.
- Given by **Prof. H.E. Armstrong**.
- Encourages **inquisitiveness, logical thinking, and confidence**.

Example 60:
Students experiment with magnets to discover the rule of attraction and repulsion themselves.

Limitation: Time-consuming and not suitable for all topics.

(5) Problem-Solving Method

- Defined by **Gagné** as "a set of events in which human beings try to achieve goals."
- Learners identify a problem, form hypotheses, collect and analyze data, and draw conclusions.
- Promotes **analytical thinking and creativity**.

Steps Involved:

1. Identify the problem
2. Set objective
3. Frame hypothesis
4. Collect data
5. Analyze data
6. Interpret and conclude

Example 61:
Students investigate why iron nails rust outside but painted ones don't — discovering the principle of oxidation.

Limitation: Slower process; not all learners progress at the same speed.

(6) Project Method

- Introduced by **W.H. Kilpatrick** —

"A project is a wholehearted purposeful activity proceeding in a social environment."

- Learners work on real-life tasks — making models, conducting surveys, or creating reports.
- Encourages **creativity, collaboration, and critical thinking**.

Example 62:
Students prepare a model of a rainwater harvesting system or conduct a survey on plastic waste.

Limitation: Needs time, resources, and strong guidance.

(7) Inductive and Deductive Methods

Inductive Method:
Moves from **specific to general** — learners draw general conclusions from examples.

Example 63 (Inductive):
"Petrol prices are rising," "Coal deposits are depleting," "Electricity costs are increasing."
→ Generalization: *Natural energy resources are decreasing with population growth.*

Deductive Method:
Moves from **general to specific** — a rule is stated first, then examples are explained.

Example 64 (Deductive):
"Save natural resources" → then examples like using public transport, conserving electricity, and afforestation are discussed.

(8) Analytic and Synthetic Methods

Analytic Method:
Breaking a complex problem into smaller parts to understand it better.
It moves from **unknown to known**.

Example 65 (Analytic):
"Stomach is made up of various tissues" → analyzing epithelium, connective, and muscular tissues separately.

Synthetic Method:
Combining known parts to form a complete understanding.
It moves from **known to unknown**.

Example 66 (Synthetic):
Given various organs — lungs, heart, brain — students combine their knowledge to understand how they form a human body system.

(51) Teacher-Centered vs Learner-Centered Methods

Teacher-Centered	Learner-Centered
Lecture, Demonstration, Lecture-cum-Demonstration	Heuristic, Problem Solving, Project Method
Teacher dominates learning	Learners explore and construct knowledge
Focus on content	Focus on learner's experience
Less interaction	High participation and discovery

A balanced teacher combines both — using structured teaching where necessary and open learning where beneficial.

(52) Five Examples to Understand the Variety of Teaching Methods

Example 67:
In a geography class, the teacher uses *Lecture-cum-Demonstration* with maps and globes for better clarity.

Example 68:
In a computer class, students use the *Discovery Method* to learn programming by trying different commands.

Example 69:
For environmental education, *Project Method* is used — learners conduct a "Clean Campus" campaign.

Example 70:
In mathematics, *Problem-Solving* is applied — students figure out real-world word problems using logical reasoning.

Example 71:
In moral education, the *Discussion Approach* helps students share views on honesty and empathy.

(53) Essence of Teaching Methods and Approaches

- **Approach = foundation; Method = implementation.**
- Methods should suit learner needs, subject type, and learning goals.
- No single method fits all — flexibility is key.
- Effective teaching is not about using one "best" method, but knowing **when and how to use the right one.**

"The art of teaching lies not in knowing many methods — but in knowing which method works best, for whom, and when."

PHASES OF TEACHING

Teaching is not a single act — it is a **continuous process** that unfolds in different **phases**.
Each phase has its own role in making teaching systematic, purposeful, and effective.

According to **Philip W. Jackson**, the teaching operation can be divided into **three distinct phases**:

1. **Pre-active Phase** (Planning Stage)
2. **Interactive Phase** (Execution Stage)
3. **Post-active Phase** (Evaluation Stage)

These three stages together complete the teaching cycle — from preparation to implementation to reflection.

(54) 1. Pre-active Phase (Planning Stage)

This is the **planning phase**, where the teacher prepares everything before stepping into the classroom.
It involves **goal-setting, content organization, and strategy selection**.

Main Activities in the Pre-active Phase:

1. **Fixing Aims and Objectives:**
    - The teacher decides *what to teach* and *why*.
    - Objectives should match learner's **age, background, ability, and interest**.
      Example 72: Before teaching "Photosynthesis," the teacher decides the goal — students should understand the process and importance of sunlight in plant life.

2. **Sequential Arrangement of Content:**
    - The content is broken into **logical, simple, and progressive units**.
    - It must flow from *known to unknown*, *simple to complex*.
      Example 73: In teaching grammar, a teacher starts from nouns → adjectives → sentences → paragraph writing.
3. **Selection of Methods, Models, and Strategies:**
    - The teacher selects **appropriate teaching styles, methods, and techniques** based on content and class level.
      Example 74: A science teacher decides to use **demonstration and project method** for the topic "Water Cycle."
4. **Preparation of Teaching Aids:**
    - Charts, videos, PPTs, and other materials are prepared in advance.

Essence:
The pre-active phase is about **planning ahead** — designing the roadmap for successful classroom interaction.

(55) 2. Interactive Phase (Execution Stage)

This is the **action phase**, where **actual teaching-learning** takes place.
The teacher interacts with learners, delivers the content, and guides them toward understanding.

According to **Philip Jackson**,

"In the interactive stage, the teacher provides pupils verbal stimulation, explanations, questioning, listening, and guidance."

Main Activities in the Interactive Phase:

1. **Classroom Connection:**
    - Establish rapport and comfort with learners before starting.
      Example 75: Begin with a friendly question or small recap of the previous class.
2. **Review of Previous Knowledge:**
    - Ask questions to link *past learning* with *new content*.
3. **Presentation of New Content:**
    - Deliver lessons using suitable **methods, techniques, and aids**.
    - Teaching must connect theory with experience.
4. **Two-way Communication:**
    - The teacher encourages participation, questions, and dialogue.
5. **Reinforcement and Motivation:**
    - Positive feedback strengthens learner engagement.
      Example 76: Praise correct answers or creative ideas to build confidence.
6. **Use of Stimulus Variation:**

- Change tone, movement, visuals, and examples to keep attention alive.

Essence:
The interactive phase is **dynamic**, **reciprocal**, and **learner-centered** — where knowledge is not just delivered but constructed together.

(56) 3. Post-active Phase (Evaluation Stage)

This is the **evaluation and reflection stage** — where the teacher assesses both **learner performance** and **teaching effectiveness**.

It begins **after the lesson is completed** but forms the foundation for future improvement.

Main Activities in the Post-active Phase:

1. **Assessment of Learning Outcomes:**
   - Use tests, quizzes, or observations to measure how far objectives are met.
     Example 77: After teaching "Fractions," the teacher conducts a worksheet to test application skills.
2. **Analyzing Behavioral Changes:**
   - Check for improvement in learners' understanding, attitude, and skills.
3. **Feedback and Reflection:**
   - The teacher reflects on what worked well and what needs revision.
     Example 78: The teacher realizes students struggled with diagrams — decides to use animations next time.
4. **Planning for Remedial Teaching:**
   - Identify weaker learners and plan support sessions.

Essence:
This phase ensures **continuous improvement** — it's not an end but the beginning of a better, more refined teaching cycle.

(57) Five Examples Summarizing the Three Phases

Example 79:
Before teaching "Photosynthesis," the teacher sets objectives (pre-active), conducts a lab experiment (interactive), and gives a quiz (post-active).

Example 80:
For a literature class, the teacher plans discussion questions (pre-active), conducts group reading (interactive), and assigns reflective essays (post-active).

Example 81:
In mathematics, lesson planning includes topic sequencing (pre-active), problem-solving in class (interactive), and checking errors for feedback (post-active).

Example 82:
In computer science, the teacher prepares a coding task (pre-active), supervises students coding (interactive), and reviews project output (post-active).

Example 83:
During moral education, the teacher plans a story-based session (pre-active), discusses moral dilemmas (interactive), and asks for written reflections (post-active).

(58) Essence of the Three Phases

Phase	Focus	Main Role
Pre-active	Planning	Setting goals, organizing content, preparing aids
Interactive	Execution	Delivering lessons, guiding learners, communication
Post-active	Evaluation	Assessing learning, reflecting, and improving

Together they create a continuous cycle of improvement —

"Plan well, teach effectively, and reflect honestly — that's the rhythm of good teaching."

Maxims of teaching

(59) Meaning and Importance

Maxims of Teaching are **simple guiding principles** that help teachers make decisions and organize classroom teaching effectively.
They are *time-tested truths* derived from psychology and educational experience, designed to make teaching more natural, engaging, and meaningful.

According to **Richard (1998)**:

"Teacher's maxims appear to reflect cultural factors, belief systems, experience, and training. Understanding which maxims teachers give priority and how they influence teachers' practices is an important goal in teacher development."

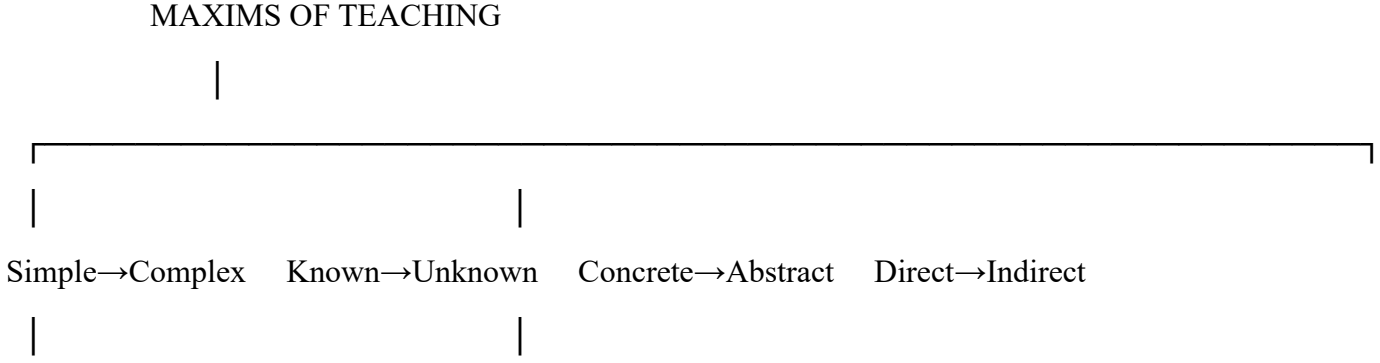
(60) Functions / Features of Maxims

Maxims are like **compass points** that guide the teacher through the complex process of teaching.
They help in:

- Motivating the teacher
- Supporting decision-making in class
- Making teaching interesting and creative
- Simplifying complex topics
- Ensuring systematic and effective teaching

(61) Mind Map: Content of Maxims of Teaching

Here's a simple conceptual layout of how maxims relate to each other:



Particular→General Analysis→Synthesis Empirical→Rational

| |

Psychological→Logical Whole→Part Indefinite→Definite

Each maxim builds upon another — moving from familiar to unfamiliar, from simple to complex, from real to abstract.

(62) Main Maxims of Teaching (with Examples)

(a) Simple to Complex

- Children learn better when teaching begins with simple concepts before progressing to difficult ones.
  Example 84: Teach "addition" before "multiplication"; "letters" before "words."

(b) Known to Unknown

- Learning should start from what students already know, connecting prior knowledge with new ideas.
  Example 85: Before teaching "minerals," recall students' understanding of "rocks" and "soil."

(c) Concrete to Abstract

- Begin with **real, tangible objects or experiences**, then move toward abstract ideas or theories.
  Example 86: Show real fruits before explaining the concept of "vitamins."

(d) Direct to Indirect

- Not everything can be taught directly; use **related experiences** to make learning relatable.
  Example 87: While teaching "acids," begin by discussing the sour taste of lemon and vinegar before defining acids scientifically.

(e) Particular to General

- Present specific examples first and then draw general conclusions or principles.
  Example 88: Observe the rising sun every morning, then generalize — "The Sun rises in the East."

(f) Analysis to Synthesis

- First analyze — break a topic into smaller parts — then synthesize or combine them for full understanding.
  Example 89: In biology, study "cells," then "tissues," then "organs," and finally the "organ system."

(g) Empirical to Rational

- Move from **experience-based learning** to **logical reasoning**.
  Example 90: Observe the melting of ice (empirical) before explaining molecular motion (rational).

(h) Psychological to Logical

- Organize teaching according to learners' **interests and abilities**, and then follow logical progression.
  Example 91: While teaching young children, start with storytelling (psychological), then introduce sentence structure (logical).

(i) Whole to Part

- Present the **whole concept first**, then divide it into smaller parts for detailed study.
  Example 92: Introduce the "human body" as a whole, then explain its systems — digestive, respiratory, circulatory, etc.

(j) Indefinite to Definite

- Content that seems vague or unclear to learners should be made clear and precise through examples and explanation.
  Example 93: "Democracy" may sound indefinite; showing examples of voting, leadership, and discussion makes it definite.

(63) Mind Map: Flow of Teaching through Maxims

START → Simple → Known → Concrete → Direct

↓

Particular → Analysis → Empirical → Psychological

↓

Whole → Indefinite → Definite → General → Abstract

This flow shows the *logical and psychological order* a teacher can follow to ensure smooth and effective learning.

(64) Five Illustrative Examples Combining Multiple Maxims

Example 94:
Teaching *water pollution* — begin from local river (known, concrete), show polluted water samples (empirical), discuss causes (analysis), and finally frame general solutions (generalization).

Example 95:
Teaching *fractions* — start with pizza slices (concrete, simple), then move to numeric representation (abstract).

Example 96:
Teaching *climate change* — begin with observed weather changes (empirical), connect to greenhouse effect (rational), and end with solutions (definite).

Example 97:
Teaching *grammar* — use daily sentences (known), break them down (analysis), explain rules (synthesis), and let learners form new sentences (application).

Example 98:
Teaching *human heart* — show diagram/model (whole), explain chambers and valves (part), and conclude with overall function (synthesis).

(65) Essence of Maxims of Teaching

- Maxims act as **psychological and logical signposts** for teachers.
- They ensure lessons are **smooth, connected, and learner-centered.**
- Applying these maxims prevents confusion and improves understanding.

"Maxims of teaching are like the grammar of education — they give structure, sense, and rhythm to the art of teaching."

Levels of Teaching

Teaching is not a uniform act — it progresses through **levels**, each building on the previous one.
These levels represent the **depth of learner engagement**, **teacher's role**, and **cognitive development** during the teaching–learning process.
The goal is to help learners move from **receiving knowledge** to **creating and challenging it.**

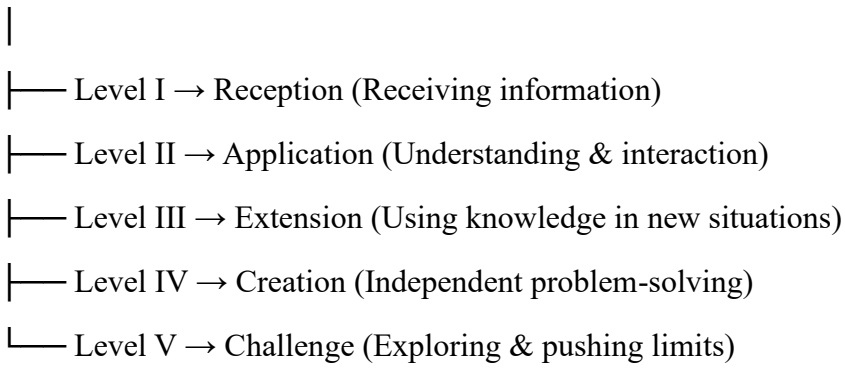
(66) Need for Levels of Teaching

- To ensure **systematic cognitive, affective, and psychomotor growth**.
- To help teachers design lessons that **match learner ability and readiness**.
- To raise students gradually from **basic understanding** to **creative and independent thinking**.

According to **Hokanson and Hooper**, teaching operates at **five progressive levels**, each more complex and participative than the last.

(67) Mind Map: Levels of Teaching

LEVELS OF TEACHING


├── Level I → Reception (Receiving information)
├── Level II → Application (Understanding & interaction)
├── Level III → Extension (Using knowledge in new situations)
├── Level IV → Creation (Independent problem-solving)
└── Level V → Challenge (Exploring & pushing limits)

(68) Level I – Reception Level

This is the **foundation level** where learning starts.
The teacher provides information, and the learners **receive and absorb** it passively.
Communication here is mostly **one-way** — from teacher to student.

Key Features:

- Focus on *listening, observation, and comprehension.*
- The teacher explains, defines, and illustrates.
- Learners are settling mentally and physically into the learning environment.

Example 99:
The teacher introduces "Photosynthesis" by explaining its definition, process, and importance while students listen and note key points.

Limitation:
Little student participation; limited critical thinking.

(69) Level II – Application Level

Here, learning becomes **interactive**.
Students begin to **apply** what they have learned through questioning, discussion, and practice.
The class becomes **more engaging and participatory.**

Key Features:

- Two-way communication begins.
- Focus on understanding and using knowledge.
- Encourages questioning, inquiry, and reasoning.

Example 100:
After learning about "Photosynthesis," students discuss why plants kept in the dark wilt and analyze the reason using prior knowledge.

Outcome:
Learners move from *remembering* to *understanding* and *applying concepts*.

(70) Level III – Extension Level

At this stage, learners **extend their knowledge** — applying learned concepts to **new and unfamiliar situations.**
They start connecting classroom learning to **real-life contexts.**

Key Features:

- Transfer of learning to practical situations.
- Learners think beyond textbook boundaries.
- Encourages independent reasoning.

Example 101:
Students apply their understanding of "photosynthesis" to explain why deforestation affects oxygen levels on Earth.

Outcome:
Development of *higher-order thinking* and *conceptual flexibility*.

(71) Level IV – Creation Level

This level involves **innovation and originality**.
Learners now **create new ideas or products**, using existing knowledge in unique ways.
The teacher acts as a **guide or supervisor** rather than a direct instructor.

Key Features:

- Independent problem-solving.
- Learners explore multiple ways to reach a solution.
- Encourages creativity and self-confidence.

Example 102:
Students design an experiment to test how different colors of light affect plant growth — applying and creating knowledge.

Outcome:
Learners develop *research attitude* and *self-reliance.*

(72) Level V – Challenge Level

This is the **highest and most advanced level of teaching**.
Learners take full ownership of learning and **challenge their own limits**.
They demonstrate **exploratory, analytical, and self-motivated** behavior.

Key Features:

- Learners take initiative in exploring new problems.
- Encourages risk-taking and intellectual curiosity.
- The teacher's role becomes that of a mentor or consultant.

Example 103:
Students propose their own sustainable farming models to combat food scarcity — combining creativity, research, and application.

Outcome:
Development of *self-directed learners* who question, innovate, and contribute new ideas.

(73) Mind Map: Progression of Learning Through Levels

Reception → Application → Extension → Creation → Challenge

↓	↓	↓	↓	↓
Listen	Understand	Apply	Innovate	Explore Beyond
Absorb	Discuss	Connect	Create	Challenge
Teacher	Guide	Facilitate	Support	Mentor

(74) Five Examples Covering All Levels

Example 104:
In a computer class—

- Reception: Teacher explains HTML basics.
- Application: Students practice writing basic code.
- Extension: They design a webpage layout.
- Creation: They build their own website.
- Challenge: They integrate multimedia and optimize performance.

Example 105:
In environmental studies—

- Reception: Teacher explains causes of pollution.
- Application: Students discuss local pollution sources.
- Extension: They connect it to climate change.
- Creation: They plan a "Clean Air" campaign.
- Challenge: They present the campaign proposal to local authorities.

Example 106:
In mathematics—

- Reception: Learn the formula for area of triangle.
- Application: Solve direct problems.
- Extension: Apply it to irregular shapes.
- Creation: Devise new problems.
- Challenge: Relate it to real-world architecture or design.

Example 107:
In literature—

- Reception: Read and understand a poem.
- Application: Discuss its theme and imagery.
- Extension: Compare it with another poet's work.
- Creation: Write a poem on a similar theme.
- Challenge: Critically analyze poetry from multiple eras.

Example 108:
In science—

- Reception: Learn about renewable energy.
- Application: Identify renewable sources locally.
- Extension: Link renewable energy to economic growth.
- Creation: Design a model of solar power system.
- Challenge: Debate policies for renewable adoption globally.

(75) Essence of Levels of Teaching

Level	Focus	Learner Role	Teacher Role
Reception	Receiving info	Passive listener	Informer
Application	Understanding	Active participant	Guide
Extension	Transfer of learning	Thinker	Facilitator
Creation	Innovation	Problem solver	Supervisor
Challenge	Exploration	Researcher	Mentor

In summary:
Teaching should evolve from **information-giving** to **exploration and creation** — developing not just memory but *mind, imagination, and maturity.*

"Good teaching is not about how much students remember, but how far they can think, apply, and create beyond the classroom."

(76) Meaning and Essence

A **dynamic curriculum** is one that grows and adapts with time — it reflects the **changing needs of society, learners, and knowledge systems.**

The teacher stands at the center of this dynamism, translating curriculum goals into **living classroom experiences.**

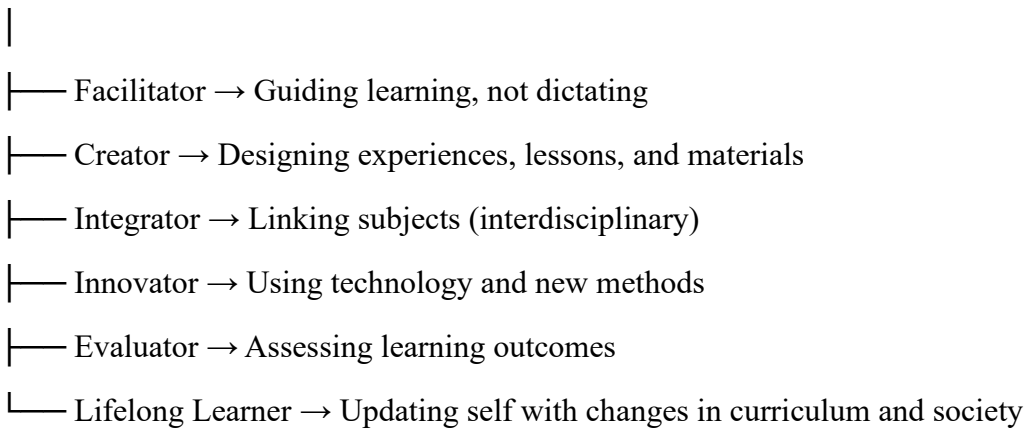
As **Brown Douglas (2007)** observed:

"Teachers can play many roles in the course of teaching, and their ability to carry them out effectively depends on the rapport they build with learners and their level of knowledge and skill."

Thus, a teacher is not merely a transmitter of information, but a **facilitator, designer, and co-learner** who makes curriculum meaningful and responsive.

(77) Mind Map: Teacher's Role in Dynamic Curriculum

TEACHER'S ROLE IN DYNAMIC CURRICULAR EXPERIENCES



Role of Teacher

(78) Changing Role of the Teacher

In earlier times, the teacher was the **sole source of knowledge**.
Today, in an age of **globalization and technology**, information is abundant — learners can access it anywhere.
Therefore, the teacher's role has shifted from **telling** to **guiding**.

Modern Teacher = Facilitator + Designer + Reflective Practitioner

Key Expectations from Teachers:

- Maintain a **conducive classroom environment**.
- Promote **interaction, reflection, and cooperation**.
- Link curriculum to **real-life experiences**.
- Balance **technology use** with **ethical responsibility**.

(79) Providing Dynamic Curricular Experiences

Dynamic curriculum experiences mean **teaching that is flexible, integrative, and learner-driven**, not static or purely theoretical.

Ways to provide dynamic curricular experiences:

1. **Make learners aware that curriculum ≠ theory alone.**

- Include activities, field work, and real-world applications.
  Example 109: In geography, students conduct a local soil study instead of only reading about soil types.

2. **Encourage healthy communication and interaction.**
   - Learning should involve **peer dialogue**, not just teacher-talk.
     Example 110: Debates, group projects, and reflection circles.
3. **Aim for positive behavioral outcomes.**
   - Curriculum should lead to **attitude change, empathy, and social responsibility**.
4. **Modify teaching styles and methods with curriculum changes.**
   - Use **new pedagogical trends** like experiential learning, blended learning, and flipped classrooms.
5. **Plan and design role according to learners' needs.**
   - The teacher must adjust instruction for **different learning styles** and **abilities**.
6. **Set clear objectives and communicate them.**
   - Both teachers and students should know the **purpose** of each lesson and its link to curriculum goals.
7. **Encourage exploration and creativity.**
   - Curriculum should not be restrictive; it should inspire curiosity.
     Example 111: In environmental education, allow students to design their own sustainability projects.
8. **Stay updated with curriculum revisions.**
   - The teacher must be aware of **psychological, philosophical, and social changes** affecting curriculum design.
9. **Use interdisciplinary approaches.**
   - Integrate knowledge from various subjects to deepen understanding.
     Example 112: Combining literature and history while teaching "Freedom Movements."
10. **Integrate technology responsibly.**

- Encourage digital literacy while promoting **ethical and critical use of online resources**.
  Example 113: Using AI or digital platforms to analyze data but discussing plagiarism and authenticity.

(80) Integrated and Interdisciplinary Approach

Modern education emphasizes **integration across disciplines.**
Teachers can link mathematics to art, science to environment, or history to economics — helping learners see **connections** rather than isolated facts.

Benefits:

- Develops **critical thinking and creativity.**

- Builds **real-world understanding.**
- Encourages **team learning and empathy.**

(81) Teacher's Dynamic Roles

Role	Description	Outcome
Facilitator	Guides learners in exploration and reflection	Learners construct knowledge independently
Creator	Designs activities and experiences beyond textbooks	Learning becomes active and meaningful
Evaluator	Monitors progress, gives feedback	Promotes continuous improvement
Integrator	Blends knowledge from various subjects	Develops holistic understanding
Innovator	Uses new tools and ideas	Makes learning relevant to modern needs
Mentor	Supports emotional and ethical growth	Builds responsible citizens

(82) Five Illustrative Examples

Example 114:
A teacher integrates *Science* and *Art* by having students create models of the solar system — combining creativity with factual learning.

Example 115:
In *Social Studies*, the teacher connects the topic "Democracy" with current political news, promoting real-world understanding.

Example 116:
A *Language* teacher uses films, podcasts, and blogs to make communication skills dynamic and engaging.

Example 117:
In *Environmental Studies*, the teacher organizes field visits and invites local experts, creating experiential learning opportunities.

Example 118:
During *Technology Education*, the teacher discusses internet ethics and cyber safety while teaching digital tools.

(83) Essence of Dynamic Curricular Role

- The **teacher is the architect** who brings curriculum to life.
- Teaching must evolve with **society, science, and technology.**
- Dynamic experiences prepare learners not just for exams, but for **life beyond school.**
- The final goal is not just content mastery, but **balanced human development.**

"A curriculum is only as dynamic as the teacher who breathes life into it."

(84) Meaning and Purpose

Instructional planning is the thoughtful process of **designing teaching-learning experiences** that effectively meet the diverse needs of learners.
It ensures that **curriculum goals, instructional methods, and classroom resources** work together to promote meaningful and inclusive learning.

In simple terms, instructional planning is the **bridge between curriculum and classroom practice.**

It helps the teacher to:

- Organize teaching systematically,
- Address individual differences, and
- Create a positive environment for learning and growth.

(85) Mind Map: Key Considerations in Instructional Planning

CONSIDERATIONS FOR INSTRUCTIONAL PLANNING

├── School Environment

├── Physical Environment

├── Psychological Environment

├── Learner Diversity

└── Content Design

Each of these considerations influences **how learning takes place** and **how effectively objectives are achieved**.

(86) 1. School Environment

A **school environment** is the **overall climate** in which teaching and learning occur.
It includes physical facilities, administrative structure, social culture, and the relationships among teachers, students, and parents.

Features of a Positive School Environment:

- Clean and well-equipped classrooms
- Supportive peer and teacher relationships
- Effective discipline and management policies
- Opportunities for both curricular and co-curricular growth

Schaps (2005) identifies key factors shaping school environment:**

- School's goals and values
- Leadership style of principal
- Teachers' instructional and disciplinary methods
- Grading and inclusion policies
- Involvement of learners and parents in decision-making

Example 119:
A school that encourages open communication between teachers and students fosters better attendance, motivation, and collaboration.

Essence:

A positive school environment motivates learners, improves engagement, and nurtures emotional well-being.

(87) 2. Physical Environment

The **physical environment** refers to the **tangible and material conditions** in which learning takes place — including buildings, lighting, ventilation, seating, and playgrounds.

According to **WHO (2003)**,

"The physical school environment encompasses all physical structures, infrastructure, furniture, and surrounding elements that may influence safety and health."

Essential Components:

- **Natural environment:** air, water, green spaces, noise control
- **Built environment:** classrooms, labs, libraries, technology access
- **Socio-cultural environment:** surroundings and community influence

Importance:

- Affects health, attention, and comfort
- Reduces absenteeism
- Enhances concentration and motivation

Research Insight:

- **Education Commission (1964–66):** Crowded classrooms reduce quality of teaching.
- **Earthman (2004):** Temperature, air quality, and lighting most influence learner performance.

Example 120:
A well-ventilated, brightly lit classroom encourages focus, while an overcrowded one discourages creativity.

Essence:

A healthy physical environment is the foundation of effective instruction.

(88) 3. Psychological Environment

Beyond physical conditions, the **psychological environment** reflects **emotional and relational climates** in the classroom.

A positive psychological environment values **inclusivity, empathy, and belonging.**
It supports learners' emotional needs and ensures that diversity is respected.

According to Graetz (2006):

"An environment that elicits positive emotional responses enhances learning and builds attachment to school."

Key Aspects:

- Promotes **safety, belonging, autonomy, and competence**.
- Encourages empathy and positive social behavior.
- Builds motivation and commitment to school values.

Watson (2003) (as cited by Schaps, 2005):

When learners' basic psychological needs are met, they engage better and act in accordance with school values.

Example 121:
A teacher who listens, respects opinions, and encourages dialogue builds a classroom where learners feel secure and valued.

Essence:

A positive psychological climate transforms classrooms into spaces where students love to learn.

(89) 4. Learner (Individual Differences)

Every classroom is **diverse** — learners differ in language, culture, socio-economic background, and learning ability.

Instructional planning must therefore emphasize **inclusiveness and participation.**

Key Considerations:

- Address varied learning styles and paces.
- Promote collaboration, empathy, and peer support.
- Encourage self-direction and decision-making.
- Provide differentiated instruction (visual, auditory, kinesthetic).

Goals:

- Develop **higher-order thinking** (analysis, creativity)
- Build **communication and collaboration skills**
- Foster **responsibility and self-regulation**

Example 122:
In an inclusive classroom, a teacher uses visual aids for visual learners, group discussions for verbal learners, and activities for kinesthetic learners.

Essence:

The success of instructional planning lies in its ability to reach every learner — not just the average one.

(90) 5. Content

The **content** is the **core of instruction** — what is to be taught and how it is presented.
It must align with learner diversity, experience, and interests.

Key Considerations in Content Planning:

- Must include **multiple perspectives** (social, cultural, ethical).
- Should reduce bias and marginalization.
- Should relate new knowledge to learners' prior experiences.
- Must encourage **critical and reflective thinking.**

Example 123:
While teaching history, a teacher includes viewpoints from different communities rather than one dominant narrative.

Essence:

Content must not just inform — it should transform learners' perspectives.

(91) Mind Map: Interconnection Among the Five Considerations

INSTRUCTIONAL PLANNING

│

├── School Environment → Sets culture and values

├── Physical Environment → Supports comfort and health

├── Psychological Environment → Builds emotional safety

├── Learner Diversity → Shapes pedagogy and inclusion

└── Content → Defines relevance and perspective

Each element complements the others to form a **holistic learning ecosystem**.

(92) Five Illustrative Examples

Example 124:
A teacher modifies lessons on "water conservation" to include local examples (content), group activities (learner engagement), and outdoor observation (physical environment).

Example 125:
Students from diverse backgrounds work on a collaborative mural about peace — promoting inclusivity (psychological environment).

Example 126:
A school with flexible seating, good lighting, and clean surroundings enhances focus and creativity.

Example 127:
Teachers include parents in school discussions, strengthening community involvement (school environment).

Example 128:
In a literature class, stories from various cultures are discussed to broaden global perspectives (content).

(93) Essence of Instructional Planning

- It transforms **curriculum intent into classroom action.**
- It balances **structure and flexibility** to suit learner needs.
- It ensures **equity, inclusion, and engagement.**
- It turns teaching from a routine task into a **thoughtful and adaptive practice.**

"Instructional planning is not about filling time — it's about shaping minds."

Planning for teaching

(94) Meaning and Importance

Teaching is not spontaneous—it is **a planned, deliberate, and reflective process.**
Effective teaching begins **before** a teacher enters the classroom.

Planning helps a teacher to:

- Set **clear learning outcomes**,
- Choose **appropriate strategies and materials**, and
- Manage **time, engagement, and evaluation** effectively.

According to **Borich (2007)**,

"Planning is a systematic process of deciding what and how learners should learn."

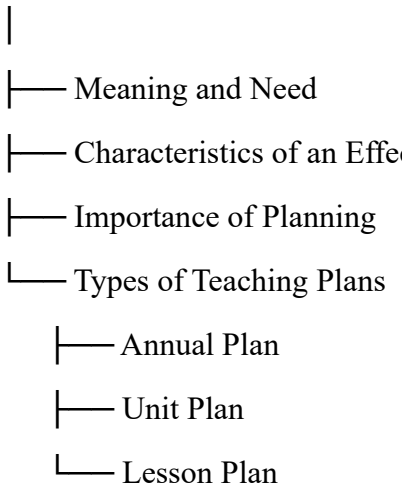
And **Clark (1983)** defines planning as:

"A basic psychological process in which a person visualizes the future, inventories means and ends, and constructs a framework to guide future action."

Thus, **planning acts as a blueprint for learning**, ensuring that teaching is purposeful, coherent, and learner-centered.

(95) Mind Map: Planning for Teaching

PLANNING FOR TEACHING



(96) Need for Planning

1. **Gives Direction:**
   Provides clarity of purpose and objectives for each teaching session.
2. **Ensures Continuity:**
   Maintains logical flow of topics throughout the academic session.
3. **Improves Time Management:**
   Avoids last-minute confusion, ensuring productive classroom time.
4. **Enhances Learner Engagement:**
   Well-planned activities keep learners active and motivated.

5. **Facilitates Evaluation:**
   Helps the teacher measure whether learning objectives are met.

Example 129:
Before teaching "The Water Cycle," a teacher plans visuals, an experiment (condensation activity), and a quiz—ensuring understanding and fun.

(97) Qualities of an Effective Teacher (Wong, 2009)

According to **Harry K. Wong**, an **effective teacher**:

(i) **Has Positive Expectations:**
Believes that every learner can succeed; lesson plans reflect this optimism.
Example 130: The teacher includes reinforcement activities for slow learners.

(ii) **Designs Lessons for Mastery:**
Lessons are sequenced so learners achieve mastery before moving on.
Example 131: The teacher provides practice worksheets until every student understands "fractions."

(iii) **Manages Time Effectively:**
Uses lesson plans and routines to reduce confusion and wasted time.
Example 132: A 40-minute period is structured as: 5 min recap → 25 min teaching → 10 min discussion.

Instructional Planning

(98) Benefits of Instructional Planning

Good planning positively affects both **instruction and classroom management.**

In a **well-planned classroom**:

- Learners are deeply engaged because they understand their roles.
- Expectations are clear and consistent.
- There is minimal confusion or time wastage.
- The environment feels **productive yet relaxed.**

Example 133:
A well-structured lesson on "Photosynthesis" includes a starter question, experiment, note-making, and recap—maintaining smooth transitions.

(99) Types of Teaching Plans

Teaching plans operate at **three interconnected levels** — annual, unit, and lesson.
Together, they form a complete instructional framework.

(a) Annual Plan

- A long-term roadmap for the **entire academic year.**
- Specifies what topics will be covered, in what order, and within what time frame.
- Ensures coverage of the **curriculum as per syllabus.**

Key Features:

- Aligned with the school calendar.

- Includes assessment schedules and co-curricular integration.

Example 134:
An annual plan for English class outlines monthly coverage—Grammar (June–August), Poetry (September–October), and Writing Skills (November–December).

(b) Unit Plan

- Focuses on a **specific unit or chapter** from the syllabus.
- Breaks down the unit into learning outcomes, key concepts, methods, and evaluation tools.

Key Features:

- Links previous knowledge with new content.
- Specifies teaching aids and activities.
- Allows flexibility for remedial teaching.

Example 135:
For the unit *"Water Resources"* — activities include map work, a short project, and field observation.

(c) Lesson Plan

- The **most detailed and immediate plan**, prepared for a single teaching session or period.
- It translates curriculum goals into **specific classroom actions.**

Structure of a Lesson Plan:

1. **General and specific objectives**
2. **Teaching aids** and materials
3. **Introduction and motivation**
4. **Presentation (steps, methods, questioning)**
5. **Recapitulation and assessment**
6. **Homework or follow-up task**

Example 136:
Lesson on "Simple Machines":

- Start with examples (scissors, lever).
- Demonstrate using models.
- Ask guided questions.
- Conclude with a summary chart.

(100) Cyclic Nature of Planning

Teaching plans are **cyclic** — they are continuously reviewed and refined based on classroom feedback and learner performance.

Planning → Implementation → Observation → Evaluation → Revision → Planning again

Example 137:
After noticing students struggle with "evaporation," the teacher revises the next lesson plan to include a simple demonstration.

(101) Five Illustrative Examples of Effective Planning

Example 138:
A teacher designs lesson plans that align with Bloom's taxonomy — ensuring higher-order thinking in every topic.

Example 139:
A science teacher integrates field trips (unit plan) to connect theory with practical experience.

Example 140:
An English teacher coordinates with art and music teachers for cross-curricular projects (annual plan).

Example 141:
A mathematics teacher uses formative quizzes at the end of each unit to adjust lesson pacing.

Example 142:
A teacher reflects weekly on what worked or failed and modifies plans accordingly—making planning a living process.

(102) Essence of Planning for Teaching

Aspect	Purpose	Outcome
Annual Plan	Broad year-long roadmap	Ensures curriculum coverage
Unit Plan	Organizes topic-wise learning	Encourages depth and coherence
Lesson Plan	Daily instructional structure	Promotes clarity, focus, and engagement

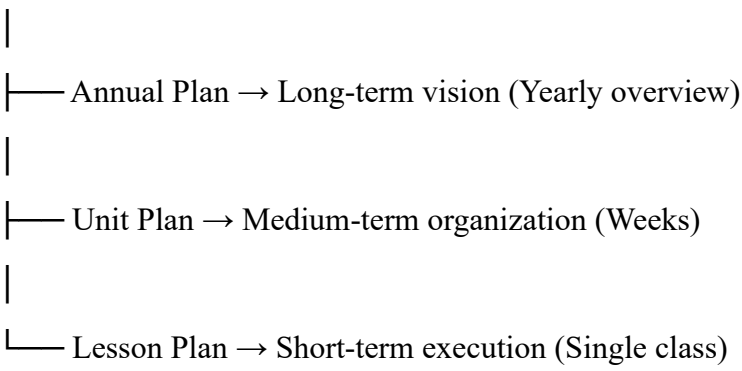
"Planning is not about predicting the future; it's about preparing for it."

Effective planning transforms teaching from routine delivery into **intentional learning design** — where **every action, question, and moment has purpose.**

PLANNING FOR TEACHING
(Annual Plan, Unit Plan, and Lesson Plan)

(103) Mind Map: The Three Levels of Teaching Planning

PLANNING FOR TEACHING


├── Annual Plan → Long-term vision (Yearly overview)
├── Unit Plan → Medium-term organization (Weeks)
└── Lesson Plan → Short-term execution (Single class)

(104) Annual Planning

The **Annual Lesson Plan** (or Yearly Plan) provides a **comprehensive overview** of the entire course for the academic year.
It guides teachers in organizing **what to teach, when to teach, and how much time to devote** to each topic.

Features of Annual Plan

- Specifies **units and subtopics** to be covered throughout the year.
- Determines **time allocation** for each topic.
- Includes **curricular and co-curricular activities** (e.g., projects, field trips, experiments).
- Acts as a **framework** for preparing weekly and daily lesson plans.
- Ensures all learning objectives and evaluation schedules are aligned with curriculum requirements.

Key Considerations for Annual Planning

1. Prepare the plan **before** the academic year begins.
2. Categorize units under specific subject areas.
3. Allocate time per subject, unit, and grade level.
4. Clearly state **learning goals** for each term or month.
5. Include **scheduled classes**, **activities**, and **events** that support learning.

Example 143:
In a Science Annual Plan for Class 8:

- **June–July:** Force and Pressure
- **August–September:** Friction and Work
- **October:** Energy and Machines
- **November–December:** Sound and Light (with experiments and models)

Essence: Annual planning gives teachers a **bird's-eye view** of the curriculum and ensures balanced coverage throughout the year.

(105) Unit Planning

A **Unit Plan** is the **systematic organization** of teaching activities around a central theme or topic.
It helps connect individual lessons into a meaningful learning experience that may span **several days or weeks**.

Definition (Dictionary of Education):

"An organization of various activities, experiences, and types of learning around a central problem or purpose developed cooperatively by a group of pupils under a teacher's leadership."

Structure of a Unit Plan

- **Subject/Course:**
- **Unit Title:**
- **Class/Grade:**
- **Previous Knowledge:** Entry behavior of learners
- **Major Objectives:** Broad learning outcomes of the unit
- **Overview:** Summary of the theme and its importance

Sub-units (in sequence):

1. **Major teaching points**
2. **Specific objectives**
3. **Teaching methods/media/approach**
4. **Number of periods**
5. **Teacher and learner activities**
6. **Learning resources**
7. **Evaluation/Assignment**

Criteria of a Good Unit Plan

1. Fits with yearly and term goals.
2. Organized and logically sequenced.
3. Promotes holistic development.
4. Based on learners' needs, abilities, and interests.
5. Offers new and flexible learning experiences.
6. Built on sound psychological principles.
7. Sustains learner attention throughout.
8. Connected to learners' physical, social, and emotional environment.

Example 144:
Subject: Environmental Studies
Unit: "Water Conservation"

- Subtopics: Sources, Uses, Water Pollution, Saving Water at Home
- Activities: Field survey, Poster making, Experiment on purification
- Evaluation: Project report and quiz

Essence: Unit planning acts as a **bridge** between the annual outline and daily classroom lessons.

Lesson Planning

(106) Lesson Planning

A **Lesson Plan** is a teacher's **detailed daily guide** that outlines how to deliver a specific lesson effectively. It converts the **objectives of unit planning** into **classroom action.**

Definition

According to **Richards (1998)**, a lesson plan should include:

- Concepts to be taught and objectives to be achieved
- Time allocation
- Teaching procedures and materials

- Practice opportunities
- Evaluation strategies

And **Tyler (1949)** adds that planning should include:

1. Specific objectives
2. Selection of learning activities
3. Organization of learning activities
4. Evaluation procedures

Format of a Lesson Plan

Subject:
Topic:
Class:
Entry Behavior: What learners already know
General Objectives: Broad aims
Methods and Media: Chosen techniques and tools

Teaching Steps:

Teaching Points	Specific Objectives	Teacher's Activity	Learner's Activity	Evaluation
Step 1: Introduction	Recall previous lesson	Ask questions	Respond and recall	Oral questioning
Step 2: Presentation	Present new concept	Explain with example	Observe and note down	Class discussion
Step 3: Practice	Reinforce concept	Give worksheet/task	Practice independently	Written feedback
Step 4: Recapitulation	Summarize learning	Ask summary questions	Share key points	Observation
Step 5: Assignment	Apply learning	Assign homework	Perform task	Submission review

Additional Elements:

- Blackboard work plan
- Teaching aids
- Time schedule
- Homework or follow-up task

Key Points for Effective Lesson Planning

a) Recognize that **each learner is unique**; plan for varied needs.
b) Choose **relevant and feasible instructional materials.**
c) Use **local environment** and **community context** when possible.
d) Lead the class confidently but listen to learners' voices.
e) Encourage **individual work** without overloading homework.
f) Include **backup plans** for missed activities or time constraints.
g) Adjust the plan to the **intellectual level** of students.
h) Keep it **flexible, balanced, and realistic.**

i) Mention **time allocation, activities, and aids** clearly.
j) Include **field trips, experiments, or demonstrations** where appropriate.

Example 145:
Lesson Topic: "Photosynthesis"

- Entry behavior: Students recall role of sunlight in plant life
- Objective: Understand the process and its importance
- Method: Demonstration with live plant
- Media: Diagram, chart, experiment setup
- Evaluation: Oral Q&A and a worksheet

Essence: A good lesson plan makes teaching **organized, learner-centered, and goal-oriented.**

(107) Comparative Overview

Aspect	Annual Plan	Unit Plan	Lesson Plan
Duration	Full academic year	Several weeks	One class period
Scope	Broad (whole course)	Moderate (one topic)	Specific (single lesson)
Focus	Time allocation & goals	Learning sequence	Daily instruction
Flexibility	Moderate	High	Very high
Purpose	Curriculum coverage	Thematic connection	Classroom delivery

(108) Five Illustrative Examples

Example 146:
In English, the annual plan includes reading, grammar, and writing spread across terms.

Example 147:
The unit "Human Body Systems" includes diagrams, role-plays, and lab observations.

Example 148:
A daily lesson on "Digestive System" involves animation videos and Q&A practice.

Example 149:
A teacher adds a remedial mini-lesson for weaker learners within her lesson plan.

Example 150:
In Social Science, a unit on "Local Government" includes a visit to the municipal office (mentioned in the annual plan).

(109) Essence of the Three-Tier Planning

Teaching without planning is like **sailing without a compass.**
A teacher who plans well ensures continuity, balance, and learner engagement throughout the year.

"Annual plans provide vision, unit plans provide structure, and lesson plans bring vision to life."

(110) Core Idea of Behaviourism

Behaviourism focuses on **observable behaviours** rather than inner thoughts or emotions.
Learning, in this view, occurs through **conditioning** — a process in which a **stimulus elicits a specific response**.

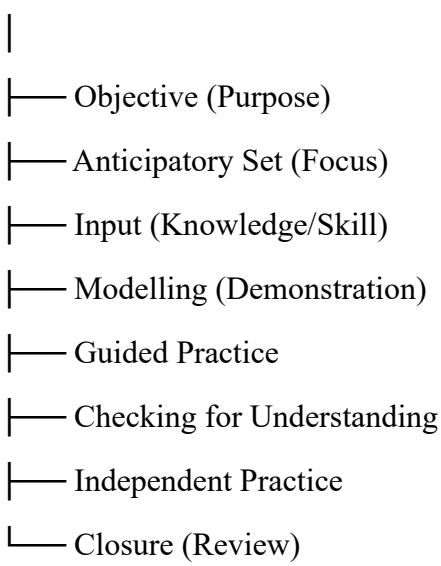
The teacher shapes behaviour by using **reinforcement** (reward or punishment), repetition, and feedback.

Key theorists include **Pavlov (Classical Conditioning)**, **Skinner (Operant Conditioning)**, **Thorndike (Trial and Error Learning)**, and **Watson (Behavioural Conditioning)**.

In a behaviourist classroom, the teacher acts as a *controller* of stimuli, while the learner's role is to *respond and adapt.*

(111) Mind Map: Behaviourist Lesson Planning

BEHAVIOURIST LESSON PLAN



Behaviourist Lesson Planning

(112) Step-by-Step Structure of a Behaviourist Lesson Plan

1. Purpose / Objective

- Defines the **learning outcome** or **expected behavioural change**.
- Objectives are observable and measurable (cognitive, affective, or psychomotor).

Example 151:
By the end of the lesson, students will be able to list five causes of water pollution (cognitive), express concern for clean rivers (affective), and design a "Clean Water" poster (psychomotor).

2. Anticipatory Set (Focus)

- The **introductory activity** that captures learners' attention.
- It connects new content to **prior knowledge** or experience.
- May include questions, a short story, real-life example, or visual cue.

Example 152:
Teacher shows two jars—one with clean water and one with dirty water—and asks: "Which would you drink? Why do some rivers look like this?"

3. Input

- Teacher provides **core content**, vocabulary, rules, and theories necessary for understanding the lesson.
- Information is structured clearly and presented step by step.

Example 153:
While teaching *"Photosynthesis"*, the teacher introduces terms like chlorophyll, carbon dioxide, sunlight, and glucose, with diagrams and notes.

4. Modelling

- Teacher **demonstrates the skill or process** students are expected to learn.
- Learners **observe** how the task is done correctly.
- Involves imitation and practice through examples.

Example 154:
Teacher solves one numerical problem on the blackboard step-by-step to show the correct method of calculating area.

5. Guided Practice

- Students perform the activity **under teacher supervision**.
- Feedback is immediate, reinforcing correct responses and correcting errors.
- Activities may be individual or group-based.

Example 155:
Students solve a few problems on the board while the teacher walks around, guiding them with hints.

6. Checking for Understanding

- The teacher **evaluates comprehension** through questioning, quizzes, or discussion.
- Ensures mastery before moving on to independent practice.

Example 156:
Teacher asks, "Why do plants need sunlight?" or "What will happen if there is no carbon dioxide?"

7. Independent Practice

- Students apply what they learned **on their own** to reinforce learning.
- This builds confidence and retention.
- Often done through homework, projects, or class presentations.

Example 157:
Students write a short paragraph on "Ways to Reduce Water Pollution at Home."

8. Closure

- The teacher **summarizes** the key points of the lesson.
- Provides feedback, clarifies doubts, and connects today's learning with the next topic.

Example 158:
Teacher recaps by asking: "What are the three main types of pollutants we discussed today?"

Essence: Closure ensures the lesson ends with **clarity and reinforcement**, not confusion or abruptness.

(113) Criticism of Behaviourist Lesson Planning

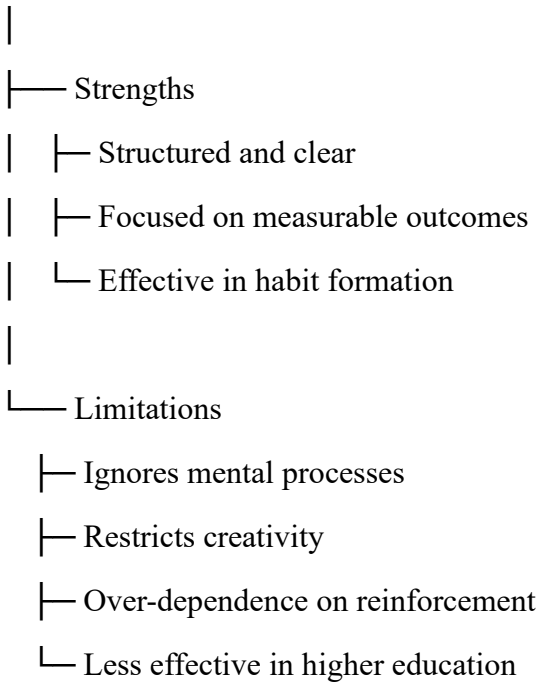
While useful for **structured, repetitive, or skill-based learning**, behaviourism has several limitations — particularly in complex, creative, or conceptual areas.

Major Criticisms:

1. **Ignores Internal Processes**
    - Behaviourism overlooks emotions, thoughts, and reasoning that influence learning.
2. **Neglects Free Will and Individuality**
    - Learners are treated as passive responders rather than active thinkers.
3. **Limited Scope in Language Learning**
    - Fails to explain abstract learning like grammar or creative language use (criticized by Chomsky).
4. **Learning Without Reinforcement**
    - Many forms of understanding occur without direct reward or punishment.
5. **Lack of Focus on the Learning Process**
    - Emphasizes output (behaviour) over process (understanding).
6. **Not Suitable for Higher Education**
    - Works better in lower classes or skill training than in abstract subjects.
7. **Classroom Size Dependency**
    - More effective in small groups; difficult to apply in large, diverse classrooms.

(114) Mind Map: Strengths vs. Limitations

BEHAVIOURIST LESSON PLANNING



(115) Five Illustrative Examples of Behaviourist Planning

Example 159:
A mathematics teacher uses immediate praise ("Good job!") when a student solves correctly — reinforcing desired behaviour.

Example 160:
In English class, students repeat pronunciation drills after the teacher, receiving stars for accuracy.

Example 161:
A science teacher uses step-by-step lab demonstrations, with repetition until all students master the experiment.

Example 162:
A PE instructor uses whistles and verbal cues to train students to start/stop activities (stimulus-response).

Example 163:
A music teacher claps a rhythm; students repeat it. Those who perform correctly get applause (positive reinforcement).

(116) Essence of Behaviourist Lesson Planning

- Learning is **observable**, **measurable**, and shaped through reinforcement.
- The teacher is the **controller** of learning stimuli, while the learner **responds** and adapts.
- It is effective for **habit formation**, **skill development**, and **early education**, but less suited for abstract reasoning.

"In behaviourism, teaching is training — learning is responding — progress is reinforcing."

(117) Core Concept: Learning by Constructing Knowledge

The **Constructivist approach**, inspired by *Jean Piaget*, emphasizes that learners **build knowledge actively** through experience, reflection, and interaction.
Learning is not about absorbing information — it's about **constructing meaning** from one's own observations and prior understanding.

In this approach:

- The **teacher acts as a facilitator**, not a transmitter of facts.
- Learners **explore, question, and reason** to create their own understanding.
- Learning happens through **interaction, discussion, and reflection**.

"Tell me and I forget, show me and I may remember, involve me and I understand."

(118) Mind Map: Constructivist Lesson Planning (5E Model)

CONSTRUCTIVIST LESSON PLANNING

├── ENGAGE → Arouse curiosity

├── EXPLORE → Hands-on learning

├── EXPLAIN → Learners express understanding

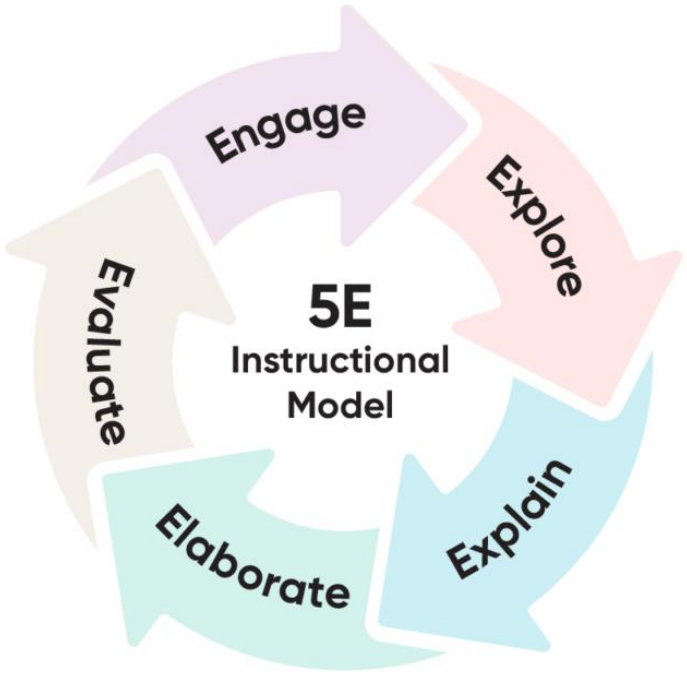
├── ELABORATE → Apply to real life

└── EVALUATE → Reflect and assess

5E Model

(119) Overview of the 5E Model

The **5E Model** — *Engage, Explore, Explain, Elaborate, and Evaluate* — was designed to help teachers plan learning experiences that are **inquiry-based and learner-centered**.



It ensures that learners move from **curiosity → exploration → understanding → application → reflection.**

(120) 1. Engage Phase – Stimulating Curiosity

Purpose:
To **connect prior knowledge** with new learning and **generate curiosity**.

Teacher's Role:

- Ask thought-provoking questions.
- Present a surprising demonstration or situation.
- Identify learners' misconceptions.

Learners' Role:

- Recall past experiences.
- Predict and question.
- Show initial curiosity about the topic.

Example 164:
The teacher begins a science lesson by lighting a candle and placing a jar over it — asking, *"Why did the flame go out?"* This triggers curiosity about air and oxygen.

Key Goal:
Make learners *ready to learn* and *mentally engaged*.

(121) 2. Explore Phase – Hands-on Experience

Purpose:
Learners actively **investigate the concept** through direct experience.

Teacher's Role:

- Provide materials, tools, or experiments.
- Facilitate collaboration and observation.
- Encourage questioning rather than giving answers.

Learners' Role:

- Work in teams.
- Observe, manipulate, and record findings.
- Develop shared understanding.

Example 165:
Students test how plants grow under sunlight vs. shade. They measure growth and record data — exploring the role of light in photosynthesis.

Key Goal:
Build **a base of shared experience** to support concept development.

(122) 3. Explain Phase – Conceptual Understanding

Purpose:
To help learners **clarify ideas** and **communicate their understanding**.

Teacher's Role:

- Guide discussion and link exploration to theory.
- Introduce correct terminology or definitions.
- Address misconceptions revealed during exploration.

Learners' Role:

- Share findings and reasoning.
- Discuss results in their own words.
- Compare their ideas with others.

Example 166:
After observing plant growth, the teacher explains *photosynthesis* using learners' data and introduces terms like *chlorophyll*, *carbon dioxide*, and *oxygen*.

Key Goal:
Shift from *experience* to *explanation* — moving from concrete to conceptual.

(123) 4. Elaborate Phase – Extending Knowledge

Purpose:
Learners **apply concepts** in new or real-world contexts and connect them to other ideas.

Teacher's Role:

- Provide challenges that extend learning.
- Facilitate projects, problem-solving, or cross-topic links.

Learners' Role:

- Apply knowledge to real situations.
- Deepen understanding through practice.
- Make interdisciplinary connections.

Example 167:
Learner's design posters or community campaigns on *saving green plants for oxygen balance* — linking science to environmental awareness.

Key Goal:
Encourage **transfer of learning** and creative application.

(124) 5. Evaluate Phase – Reflection and Assessment

Purpose:
To determine **how well learners have understood and applied the concept** — through both self and teacher assessment.

Teacher's Role:

- Observe learners during activities.
- Use rubrics, checklists, or portfolios.
- Provide constructive feedback.

Learners' Role:

- Reflect on what they've learned.
- Identify areas for improvement.
- Demonstrate learning through presentations, tests, or projects.

Example 168:
Learners explain the process of photosynthesis through a concept map or short group presentation.

Key Goal:
Promote **reflection, self-assessment, and continual growth.**

(125) Nature of Evaluation in Constructivism

- **Continuous and diagnostic** — not just at the end.
- Focuses on **learning process** rather than final product.
- Encourages learners to **assess their own understanding.**
- Feedback is **descriptive**, not merely numerical.

Constructivist evaluation views learning as *cyclic and evolving* — every answer leads to new questions.

(126) Mind Map: Roles in 5E Model

TEACHER ROLE LEARNER ROLE

Engage → Stimulate curiosity → Predict and question

Explore → Facilitate inquiry → Observe, test, collaborate

Explain → Guide discussion → Share and clarify

Elaborate → Extend learning → Apply and create

Evaluate → Reflect and assess → Self-evaluate and present

(127) Five Illustrative Examples of Constructivist Lesson Planning

Example 169:
In Physics, before introducing Newton's Laws, the teacher asks, *"Why do you move backward when a bus suddenly starts?"* Students discuss, explore, then connect to Newton's third law.

Example 170:
In History, students act out a historical event (Engage), analyze causes (Explore), discuss significance (Explain), relate it to modern parallels (Elaborate), and write reflections (Evaluate).

Example 171:
In Mathematics, learners explore patterns in nature (shells, leaves), form their own hypotheses, and discover Fibonacci sequence through guided activity.

Example 172:
In Art, students paint their emotions after listening to music — explaining later how colors represent mood.

Example 173:
In Geography, students create weather diaries for a week and present findings about local climate changes.

(128) Comparing Behaviourist and Constructivist Lesson Planning

Aspect	Behaviourist Approach	Constructivist Approach (5E)
Role of Learner	Passive responder	Active participant
Role of Teacher	Controller / Instructor	Facilitator / Guide
Focus	Observable behaviour	Conceptual understanding
Method	Drill, reinforcement	Inquiry, exploration
Evaluation	External tests	Continuous and reflective
Outcome	Skill acquisition	Concept construction and transfer

(129) Essence of Constructivist Lesson Planning

- Learning is **active, social, and reflective.**

- Teacher's role is to **guide inquiry**, not dictate information.
- Knowledge is **constructed**, not transmitted.
- Evaluation is **continuous** and **integrated** within learning.

"The constructivist classroom is not about what the teacher does — it's about what the learner becomes."

Basic considerations for selecting a method of teaching

(130) Context Example: "Kitchen Chemistry – Acids and Bases"

Anjali, a science teacher, wants to teach *"Kitchen Chemistry: Acids and Bases."*
Her goal is not only to teach the **scientific concept** but also to **help learners and their families handle household chemicals safely**.

To make this lesson effective, Anjali must carefully **select the right instructional method** — one that matches:

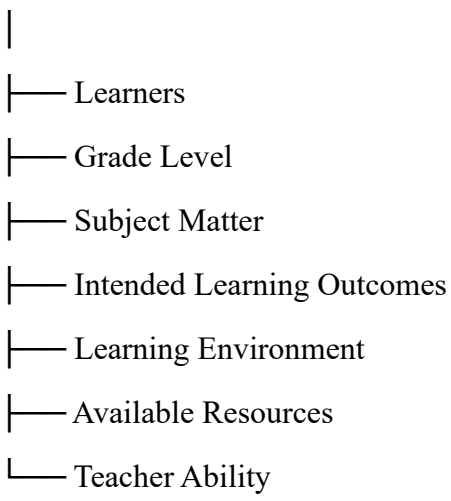
- the **learners' needs**,
- the **subject content**, and
- the **intended outcomes.**

No single method is the "best." The *best method* is the one that suits **the context, content, and learners** at that specific moment.

Factors Affecting Method Selection

(131) Mind Map: Factors Affecting Method Selection

CONSIDERATIONS FOR SELECTING A METHOD



(132) i) Learners

- Every classroom has **diverse learners** — differences in background, ability, and motivation.
- The chosen method should allow **active participation**, peer learning, and differentiated opportunities.

Example 174:
In a mixed group, Anjali can use **group experimentation** — each group tests a different kitchen substance (lemon, baking soda, soap) to classify them as acids or bases.

Key Point:

The method should invite *every learner* to contribute, not just the confident ones.

(133) ii) Grade Level of Learners

- The **developmental stage** of learners determines the level of complexity in teaching methods.
- For **younger learners**, activity-based, play-based, or demonstration methods are best.
- For **older learners**, inquiry, problem-solving, and project-based approaches work better.

Example 175:
If teaching middle-school learners, Anjali might use **demonstration and guided inquiry**; for high school, she could assign **mini-projects** like identifying acidic and basic kitchen products at home.

Key Point:

Match the method to the **mental maturity** and **attention span** of the learners.

(134) iii) Subject Matter

- The **nature of the subject** strongly influences method choice.
- Scientific subjects like Physics, Chemistry, and Biology demand **experimentation, inquiry, and verification**.
- Language or humanities subjects may favor **discussion, storytelling, or role play**.

Example 176:
For *"Acids and Bases,"* a **demonstration** or **experiential method** (testing substances with indicators like turmeric or litmus paper) is more effective than lectures.

Key Point:

Choose the method that reflects the **nature and logic** of the subject.

(135) iv) Intended Learning Outcomes (ILOs)

- Learning outcomes define **what learners will know or do** after the lesson.
- They guide the teacher in aligning the teaching method with **expected behavioral changes** (cognitive, affective, psychomotor).

Example 177:
If Anjali's outcomes are:
a) Define acids and bases.
b) Identify acids and bases in daily life.
c) Demonstrate safe handling of household acids.
Then she should use **demonstration and inquiry methods** rather than just lecture.

Key Point:

The chosen method should directly support the **achievement of objectives.**

(136) v) Learning Environment

- The **learning environment** includes the **physical**, **social**, and **psychological** atmosphere of the classroom.

- A **positive, stimulating** environment encourages curiosity and engagement.

Elements of learning environment:

- Clean, well-ventilated, and safe space.
- Supportive teacher–student and peer relationships.
- Respect, inclusivity, and cooperation.

Example 178:
Anjali arranges her class in small groups with safe lab materials and encourages teamwork — fostering a supportive, engaging space for exploration.

Key Point:

A positive environment makes **any method** more effective; a negative one ruins even the best plan.

(137) vi) Available Resources

- Resources include **teaching aids, lab equipment, digital tools, community expertise,** and **time.**
- A method is only practical if the required materials and support are available.

Example 179:
If Anjali's school lacks lab chemicals, she can use **household materials** (vinegar, lemon, soap, turmeric) for experiments — integrating **kitchen chemistry** safely.

Key Point:

Choose methods that can be **realistically implemented** with available tools and time.

(138) vii) Teacher Ability

- The teacher's **knowledge, creativity, and confidence** determine how well a method works.
- Even the best-designed method can fail without skilled facilitation.

Effective teaching demands **Pedagogical–Technological–Content Knowledge (PTCK)** — understanding what to teach, how to teach, and how to use tools effectively.

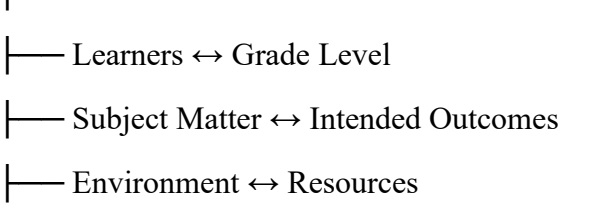
Example 180:
Anjali, comfortable with demonstrations, can modify it into a **guided inquiry** model by asking students to predict and record results — blending her strength with inquiry principles.

Key Point:

A teacher must select a method that **matches their own competence and comfort level** while still challenging learners.

(139) Mind Map: Interaction Between Factors

SELECTION OF METHOD



└── Teacher Ability → Integrates All

Each factor **influences and balances** the others — an effective method results from their *harmonious combination.*

(140) Five Illustrative Examples of Method Selection

Example 181:
For *"Acids and Bases,"* Anjali uses **demonstration + inquiry**, allowing learners to observe color changes using natural indicators.

Example 182:
In a language class, the teacher chooses **drill and practice** to improve pronunciation (subject-oriented).

Example 183:
In a higher-grade biology class, the teacher uses **problem-solving** for diseases caused by bacteria (grade-oriented).

Example 184:
A teacher with limited lab resources uses **virtual simulation** tools to demonstrate chemical reactions (resource-based adaptation).

Example 185:
A teacher with strong communication skills prefers **discussion and group analysis** while teaching social ethics (teacher ability-based choice).

(141) Essence of Method Selection

- There is **no single best method** — only **the most suitable one** for the given context.
- Effective teaching arises when a teacher aligns:
  Learners + Subject + Outcomes + Environment + Resources + Own Strengths.
- The ultimate goal is **meaningful, safe, and lasting learning.**

"The art of teaching lies not in choosing the perfect method, but in making any method perfect for your learners."

Teacher-cantered methods

(142) Overview

Despite the global shift toward learner-centered and constructivist models, **teacher-centered methods** still dominate many classrooms — especially in situations involving **large groups**, **tight schedules**, or **the need for structured delivery**.

In these methods, the **teacher holds the central role** — deciding the *content, pace, sequence,* and *activities*. Learners, meanwhile, are largely **passive recipients** of information.

The teacher is the source of knowledge; learners listen, observe, and record.

(143) Mind Map: Teacher-Centered Approach

TEACHER-CENTERED METHODS

│

├── Lecture Method

│ ├─ Teacher-controlled presentation

│ ├─ Efficient for large classes

│ └─ Information-focused

│

├── Demonstration Method

│ ├─ Teacher shows, learners observe

│ ├─ Used in science and practical subjects

│ └─ Combines visual + verbal teaching

│

└── Tutorial/Dictation/Recitation

├─ Teacher guides and evaluates

├─ Learners reproduce or follow

└─ Reinforces accuracy and recall

The Lecture Method

(144) The Lecture Method

The **lecture method** is one of the oldest and most widely used instructional approaches.
It is derived from the Latin word *lectus* meaning *"that which is read."*

In modern classrooms, the lecture is an **oral presentation** by a teacher to a group of learners — often supported by **visual aids** such as PowerPoint slides, charts, or a whiteboard.

(145) Nature of the Lecture Method

- **Teacher-centered:** The teacher dominates the classroom.
- **Content-driven:** Focuses on information transmission.
- **Structured:** Lessons are pre-planned and sequential.
- **Efficient:** Covers a large portion of the syllabus in limited time.
- **Monologic:** One-way communication — teacher speaks, learners listen.

Best suited for **higher-level classes** where learners already have basic conceptual understanding and self-regulation.

(146) When to Use the Lecture Method

- For **introducing new topics** that require explanation or overview.
- When **time is limited** and large amounts of information must be shared.
- To **summarize or synthesize** key ideas at the end of a unit.
- In **large classrooms** where individualized methods are impractical.

Example 186:
A university professor lectures on *The Human Digestive System* to 100 students, explaining structure, function, and coordination using diagrams and slides.

(147) Advantages of Lecture Method

a) **Teacher Control:**

- The teacher manages both *content and flow*.
- Maintains discipline and consistent pace.

b) **Efficient Coverage:**

- Large topics can be delivered quickly.
- Effective in syllabus-heavy subjects (like science or history).

c) **Direct Delivery of New Information:**

- Ideal for theoretical knowledge or factual content.

d) **Economical:**

- Requires minimal materials or setup.
- Suitable for large classes with limited resources.

e) **Clear and Structured Presentation:**

- Helps organize learners' understanding through sequencing and summarization.

Example 187:
In an economics class, the teacher gives a lecture explaining *demand and supply* curves using examples and quick chalkboard sketches.

(148) Disadvantages of Lecture Method

While efficient, the lecture method has serious drawbacks, especially in fostering critical and creative thinking.

a) **One-Way Communication:**

- Learners receive information passively; limited feedback.
- No scope for questioning, reasoning, or collaboration.

b) **Passive Listening:**

- Learners become disengaged, leading to boredom.
- Retention and understanding are shallow.

c) **Lack of Individual Attention:**

- Difficult to address varying learning paces in large classes.

d) **Overdependence on Teacher's Skill:**

- The effectiveness depends heavily on the teacher's speaking ability and clarity.

e) **Discourages Critical Thinking:**

- Students may memorize without analyzing or questioning.

Example 188:
During a lecture on *Photosynthesis*, students take notes mechanically without understanding the actual process — resulting in rote learning.

(149) Mind Map: Pros and Cons of Lecture Method

LECTURE METHOD

│

├── ADVANTAGES

│ ├─ Teacher control

│ ├─ Time-efficient

│ ├─ Economical

│ ├─ Structured delivery

│ └─ Suitable for large groups

│

└── DISADVANTAGES

├─ One-way communication

├─ Passive learning

├─ Limited feedback

├─ Dependent on teacher's skill

└─ Minimal critical engagement

(150) Improving the Lecture Method

Even within a teacher-centered structure, lectures can be **made more interactive**:

1. **Use Visual Aids:** Charts, models, and short videos increase engagement.
2. **Ask Quick Questions:** Pause and let learners predict or summarize.
3. **Integrate Mini Activities:** Short think-pair-share moments or demonstrations.
4. **Summarize Frequently:** Reinforce key points every few minutes.
5. **End with Reflection:** Encourage learners to write one new idea learned.

Example 189:
A chemistry teacher, while lecturing on acids, pauses to ask: "Which kitchen item do you think acts like an acid?"
This sparks curiosity and connects classroom learning to daily life.

(151) Suitability of Lecture Method

Appropriate for:

- Higher education and senior secondary levels.

- Theoretical subjects (Philosophy, History, Political Science).
- Review or summary lessons.
- Limited-resource environments.

Inappropriate for:

- Early and middle school levels.
- Skill-based or practical subjects.
- Diverse, multilingual, or highly interactive classrooms.

(152) Essence

The lecture method remains a **time-tested instructional tool**, especially for **information-heavy teaching**. However, it should be balanced with **interactive and learner-centered techniques** to ensure understanding, engagement, and retention.

"A good lecture doesn't just talk *to* the class — it thinks *with* the class."

Demonstration method

(153) Overview

The **Demonstration Method** bridges the gap between *lecture* and *hands-on learning*.
It's **activity-centered** and **semi child-centered**, emphasizing **learning by seeing** and, later, **learning by doing**.

Here, the **teacher performs** an activity or experiment while **learners observe, question, and record**. Once the process is clear, learners may **replicate** it themselves — making the learning more concrete and lasting.

Demonstration converts abstract concepts into visible experiences.

(154) Mind Map: Demonstration Method

DEMONSTRATION METHOD

│

├── Principle: Activity & Concrete Learning

│

├── Phases:

│ ├─ Planning and Rehearsal

│ ├─ Purpose Setting

│ ├─ Active Learner Participation

│ └─ Development of Scientific Thinking

│

├── Merits

│ ├─ Builds curiosity and understanding

│ ├─ Promotes scientific thinking

│ └─ Engages learners visually

│

└── Limitations

├─ Time-consuming

├─ Resource-dependent

└── Risk of failure or disinterest

(155) Core Principle

Demonstration follows the **maxim of teaching "Concrete to Abstract."**
It makes invisible ideas visible through action — allowing learners to grasp *why* and *how* something happens rather than simply memorizing facts.

Example 190:
While teaching *"Air exerts pressure,"* the teacher places a glass filled with water upside down using a card — demonstrating that the card doesn't fall because air pushes upward.
Learners watch, predict, and then perform it themselves later.

(156) Steps in Demonstration Method

i) Planning and Rehearsal

- Identify which concept requires demonstration.
- Collect all materials in advance and arrange them sequentially.
- Rehearse the steps before class to ensure smooth execution.

A poorly prepared demo can damage credibility and learner confidence.

ii) Purpose of Demonstration

- Clearly state *why* the experiment is being shown.
- Tell learners *what to observe* and *what conclusion* to draw.

Example: "Notice how the color changes when the acid touches the base."

iii) Active Participation of Learners

- Invite learners to assist: set up instruments, read steps, or record results.
- Encourage them to ask questions and predict outcomes.

iv) Training in Scientific Thinking

- Emphasize observation, hypothesis, verification, and inference.

Learners practice the process of *"scientific method"* rather than just watching.

(157) Merits of Demonstration Method

1. **Encourages Scientific Thinking**
    - Learners observe phenomena, analyze results, and reason logically.
2. **Concrete Understanding**

- Abstract theories become tangible and easier to grasp.

3. **Active Involvement**
    - Visual and participatory engagement boosts curiosity and memory.
4. **Psychologically Sound**
    - Appeals to sensory learning (seeing and hearing).
5. **Culturally Flexible**
    - Works effectively in multicultural, mixed-ability classrooms because demonstration transcends language barriers.

Example 191:
A teacher demonstrates *acid-base reactions* using natural indicators like turmeric and soap water — accessible and culturally relatable materials.

(158) Limitations of Demonstration Method

1. **Time-Consuming**
    - Requires extensive preparation, setup, and cleanup time.
2. **Resource Intensive**
    - Needs specific materials, tools, and safety measures.
3. **Risk of Failure**
    - A failed experiment can lower learners' motivation and trust.
4. **Limited Scope**
    - Not all topics can be effectively demonstrated — abstract or theoretical concepts may not fit.
5. **Learner Passivity (if poorly executed)**
    - If learners only watch without interaction, the purpose is lost.

Example 192:
A chemical reaction fails due to improper proportion of chemicals — leading to confusion and disengagement.

(159) How to Make Demonstration Effective

- Ensure all learners **see clearly** (arrange seating or use projection).
- Keep materials **ready and safe**.
- Encourage **pre-demonstration predictions**.
- Follow up with **post-demonstration discussion**.
- Let learners **replicate** or simulate the experiment individually or in groups.

Example 193:
After demonstrating *rusting of iron nails*, the teacher asks groups to set up their own small rusting jars and record changes over a week.

(160) Comparison: Lecture vs. Demonstration

Aspect	Lecture Method	Demonstration Method
Learner Role	Passive listener	Active observer
Focus	Verbal explanation	Visual performance
Learning Type	Abstract	Concrete
Interaction	One-way	Two-way
Suitability	Large theoretical classes	Practical, science-based classes
Example	Explaining photosynthesis verbally	Showing how light affects photosynthesis in plants

(161) Illustrative Examples

Example 194:
In Biology, the teacher demonstrates *osmosis* using a potato cup filled with sugar solution — showing water movement visibly.

Example 195:
In Physics, demonstrating *reflection of light* using a mirror and ray box helps visualize laws of reflection.

Example 196:
In Home Science, teacher shows how to test for starch in food using iodine — linking classroom science with real-life kitchen application.

Example 197:
In Mathematics, a teacher uses paper folding to demonstrate geometric theorems (e.g., sum of angles in a triangle).

(162) Essence

The **Demonstration Method** blends *seeing* with *understanding* — making learning memorable and meaningful.
It stands midway between *teacher-centered* and *learner-centered* approaches:

- Teacher initiates and guides,
- Learners observe, reflect, and participate.

"What I hear, I forget. What I see, I remember. What I do, I understand." — Confucius

Learner-centered methods

(163) Overview

The **learner-centered approach** emerged from the **humanistic movement** in psychology, emphasizing the **individual learner's needs, experiences, and autonomy**.
It is the opposite of the **teacher-centered model**, where the teacher dominates and learners follow.

In learner-centered methods, the **learner becomes an active participant** and co-creator of learning, while the **teacher acts as a facilitator**, guide, and collaborator.

"The best teacher is one who makes himself progressively unnecessary." — Thomas Carruthers

(164) Mind Map: Learner-Centered Approach

LEARNER-CENTERED METHODS

|

├── Core Principles
│ ├─ Active participation of learners
│ ├─ Need-based and interest-driven learning
│ ├─ Teacher as facilitator
│ ├─ Learner autonomy and independence
│ └─ Real-life and experiential learning
│
├── Major Methods
│ ├─ Inquiry Approach
│ └─ Problem-Solving Method
│
└── Outcomes
├─ Self-directed learners
├─ Critical thinking and creativity
└─ Lifelong learning habits

(165) Core Characteristics

1. **Learners are active participants.**
   They explore, question, experiment, and construct meaning through engagement.
2. **Teacher acts as a facilitator.**
   Instead of lecturing, the teacher designs and guides experiences that spark curiosity.
3. **Content is flexible and relevant.**
   Learners' interests and real-world contexts are integrated into the curriculum.
4. **Learning is experiential.**
   Emphasis on *learning by doing*, *reflecting*, and *collaborating*.
5. **Outcome is independence.**
   Learners become **self-directed**, taking responsibility for their own progress.

Example 198:
In a class on *environmental pollution*, instead of lecturing, the teacher asks learners to observe their neighborhood, list pollution sources, and suggest community-based solutions.

Inquiry approach

(166) INQUIRY APPROACH

(a) Concept

The **inquiry approach** is rooted in the ideas of **John Dewey**, who emphasized *learning through thinking and doing.*
According to Dewey, *"Knowledge is an outcome of inquiry and a resource for further inquiry."*

In this approach, **learning begins with curiosity** — learners pose questions, investigate, and construct understanding through discovery.

Inquiry = Asking, Exploring, Discovering, Reflecting.

(b) Definitions

- **Gagné (1963):**
  "Inquiry is a set of activities characterized by problem-solving in which each new phenomenon becomes a challenge for thinking."
- **Hampshire College:**
  "It is a form of self-directed learning in which learners determine what they need to learn, identify resources, and assess their progress."

(c) Key Characteristics

1. **Driven by Questions or Problems** – Curiosity initiates learning.
2. **Active and Experiential** – Learners explore real situations.
3. **Learner-Centered and Self-Directed** – Responsibility lies with the learner.
4. **Facilitative Teacher Role** – The teacher guides, not dictates.
5. **Emphasis on Reflection** – Learners think critically about their process and outcomes.

(d) Phases of Inquiry-Based Learning

(Adapted from Pedaste et al., 2015)

I. Orientation

- Stimulate curiosity and interest in a topic or problem.
- Define the problem and identify key variables.
  Example 199: The teacher asks, "Why does metal rust but plastic doesn't?"

II. Conceptualization

- Learners generate **questions** and **hypotheses.**
- Predict possible outcomes based on prior knowledge.
  Example 200: Learners hypothesize, "Rusting needs both air and water."

III. Investigation

- Learners plan and conduct explorations or experiments.
- Collect, analyze, and interpret data.
  Example 201: Groups keep iron nails in different conditions (air, water, oil) and observe changes.

IV. Conclusion

- Learners draw conclusions from findings.
- Confirm or modify hypotheses.
  Example 202: Learners conclude that "Rusting occurs in presence of air and moisture."

V. Discussion

- Communicate results, reflect on learning, and get feedback.
  Example 203: Groups present results to class and discuss preventive methods.

(e) Advantages of Inquiry Approach

a) Enhances **intellectual capacity** and logical reasoning.
b) Promotes **experiential and meaningful learning.**
c) Develops **skills of observation, hypothesis, and experimentation.**
d) Encourages **creativity and innovation** through open-ended discovery.
e) Reduces rote learning — knowledge becomes self-constructed.

Example 204: In Social Studies, learners conduct a mini-survey on water usage in homes and infer conservation methods.

(f) Limitations of Inquiry Approach

a) **Requires teacher training** for effective facilitation.
b) Difficult in **large classes** or rigid school systems.
c) **Textbooks and exams** often do not support inquiry-based learning.
d) **Resource-dependent** (labs, materials, time).
e) **Time-consuming** — may slow syllabus coverage.

Example 205: A school with limited lab facilities finds it challenging to let every learner test chemical reaction independently.

(g) Mind Map: Inquiry Approach

INQUIRY APPROACH
│
├── Stages
│ ├─ Orientation → Problem Identification
│ ├─ Conceptualization → Questions & Hypotheses
│ ├─ Investigation → Exploration & Experimentation
│ ├─ Conclusion → Results & Insights
│ └─ Discussion → Communication & Reflection
│
├── Teacher Role → Facilitator & Questioner
├── Learner Role → Investigator & Thinker
└── Output → Discovery of New Knowledge

(h) Essence

The **inquiry approach** transforms learning from passive absorption to **active investigation**.
It cultivates a *scientific mindset* — encouraging curiosity, evidence-based reasoning, and lifelong learning habits.

“Tell me and I forget, show me and I remember, involve me and I understand.” — Chinese Proverb

(167) Overview

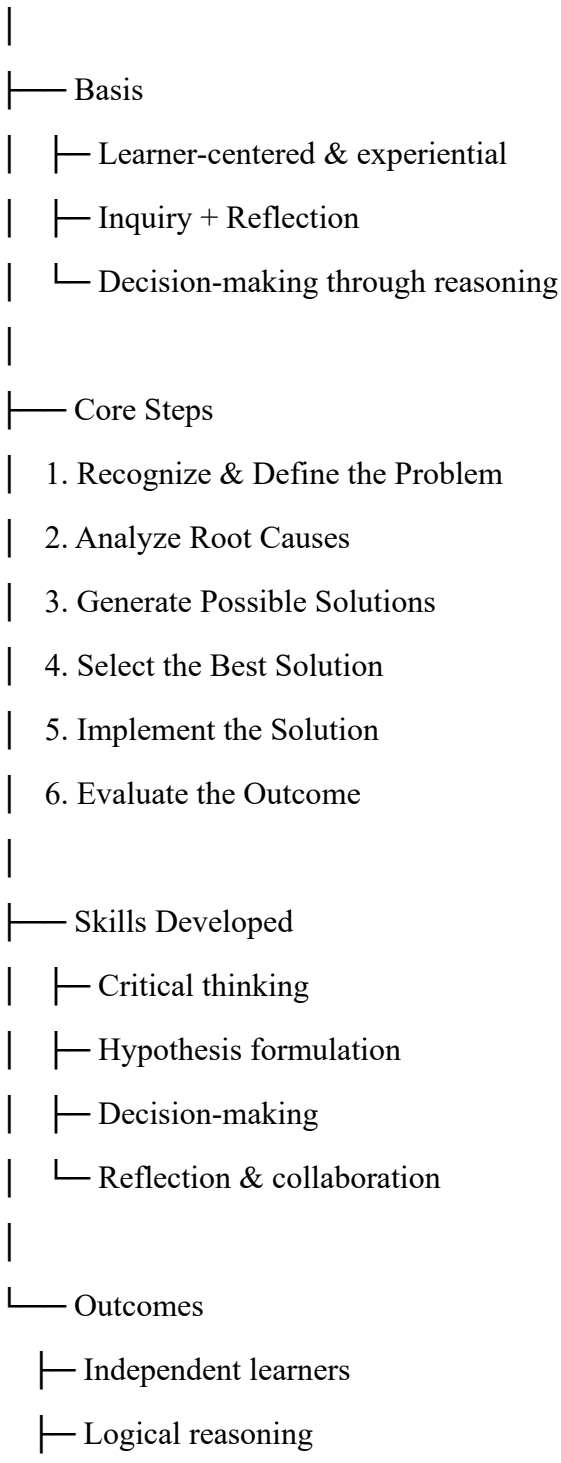
The **Problem-Solving Method** is a **learner-centered approach** that engages students in tackling real or simulated problems through **critical thinking, reasoning, and reflection**.
It assumes that learners are **capable of taking responsibility** for their learning and can apply knowledge to **resolve real-life issues**.

Unlike rote learning, this method cultivates **analytical, creative, and decision-making skills**, aligning closely with the **scientific inquiry process**.

"A problem well stated is a problem half-solved." — Charles Kettering

(168) Mind Map: Problem-Solving Approach

PROBLEM-SOLVING METHOD



└─ Real-life problem-solving skills

(169) Concept and Essence

Problem-solving means **attacking a difficulty with a reflective and scientific mindset**, not just memorizing or imitating.
Learners identify a problem, investigate causes, explore solutions, and evaluate outcomes — all under **teacher guidance but learner initiative**.

Gagné (1977): "Problem-solving is the highest level of learning in the hierarchy — it results in discovering new rules and relationships."

(170) Definitions

- **Risk:** "Problem-solving is a planned attack upon a difficulty or perplexity to find a satisfactory solution."
- **Kulsan and Stone:** "It means some perplexity in the environment or some unexpected occurrence which must be explained."

Example 206:
A student group notices their classroom plants aren't growing well. They identify potential causes (light, water, soil), test solutions, and find that lack of sunlight was the main issue — a classic problem-solving process.

(171) Characteristics

i. Learning is **active, constructive, and context-based.**
ii. The teacher acts as a **facilitator**, not a dictator.
iii. Activities are **purposeful and meaningful.**
iv. Based on **scientific thinking** — observation, reasoning, reflection, and verification.
v. Encourages **decision-making using data**, not guesses.

Problem-Solving Instruction

(172) Steps in Problem-Solving Instruction

I. Recognize and Define the Problem

- Identify and clearly state the problem.
- It should be *specific, observable,* and *understandable.*
- Learners can use brainstorming or questioning to refine it.

Example: "Why does our school tap leak water every day?"

Key rule: State problems in clear, question-like form — concise and definite.

II. Analyze the Problem (Find Root Causes)

- Look beneath symptoms to discover the real cause.
- Use methods like **Root Cause Analysis (RCA)** — ask *why* repeatedly until the real cause is found.

- Define how one event triggers another.

Example: Leaking tap → worn-out washer → irregular maintenance schedule → no assigned responsibility.

III. Generate Alternative Solutions

- Encourage **divergent thinking** — multiple possible answers.
- Relate each proposed solution to the identified cause.
- Merge similar ideas and remove impractical ones.

Example 207:
Possible solutions: replace tap, assign daily maintenance, install sensor taps, or teach water conservation habits.

IV. Select the Best Solution

- Evaluate each alternative for **feasibility and acceptability.**
- Criteria:
    - Can it be done in time?
    - Is it cost-effective?
    - Does it solve the cause, not just symptoms?
    - Will people accept and support it?

Example 208:
The class decides to replace the tap washer (low cost, high impact) and create a maintenance rota.

V. Implement the Solution

- Plan who will do what, how, and when.
- Execute the chosen plan systematically.
- Document each step for later evaluation.

Example: Assign two students to monitor the new tap daily for a week.

VI. Evaluate the Outcome

- Check if the problem was solved effectively.
- Collect feedback and reflect on what worked or failed.
- Modify the plan if necessary.

Example: After a week, students observe no leakage — success confirmed.

(173) Advantages of Problem-Solving Method

a) Encourages **active participation** and independent learning.
b) Develops **logical, analytical, and scientific thinking.**
c) Builds **confidence and self-reliance.**
d) Promotes **collaboration and peer learning.**
e) Improves **decision-making and responsibility.**

f) Fosters **interest and curiosity** toward real-world issues.
g) Strengthens **problem-identification and hypothesis-testing skills.**

Example 209:
Students design a recycling plan for their school and implement waste segregation bins — solving a local environmental problem.

(174) Disadvantages / Limitations

a) **Time-consuming** — not suitable for rigid syllabi or large classes.
b) **Difficult across all subjects** (especially abstract theoretical ones).
c) Learners may lack the **resources** or materials needed.
d) May create **uneven workload** and confusion without guidance.
e) **Assessment** of learning outcomes is complex.
f) Not all learners are comfortable with open-ended tasks — some prefer structure.

Example 210:
In overcrowded schools, limited lab access can make scientific problem-solving impractical for every student.

(175) Improving Effectiveness

1. Choose **real and relatable problems.**
2. Allow **group work** to share responsibility.
3. Provide **scaffolding questions** to guide inquiry.
4. Encourage **reflection journals** post-activity.
5. Integrate **evaluation rubrics** focusing on reasoning, not just the result.

(176) Example Application: Science Lesson

Topic: Air Pollution
Problem: Why is the air quality near the school poor?
Steps:

1. Identify causes — nearby traffic, burning leaves.
2. Collect data — observe traffic, check AQI reports.
3. Generate solutions — plant trees, awareness campaign.
4. Select best — start "No Idling Zone" sign near gate.
5. Implement — make posters and involve principal.
6. Evaluate — observe change after a month.

Outcome: Learners apply scientific and civic reasoning in real context.

(177) Essence

The **Problem-Solving Method** transforms learners into **thinkers, decision-makers, and innovators.**
It develops the ability to face uncertainty with reasoning — a vital skill for lifelong learning and responsible citizenship.

"The measure of intelligence is the ability to change." — Albert Einstein

Strategies and techniques of conducting inquiry and problem-solving

(178) Overview

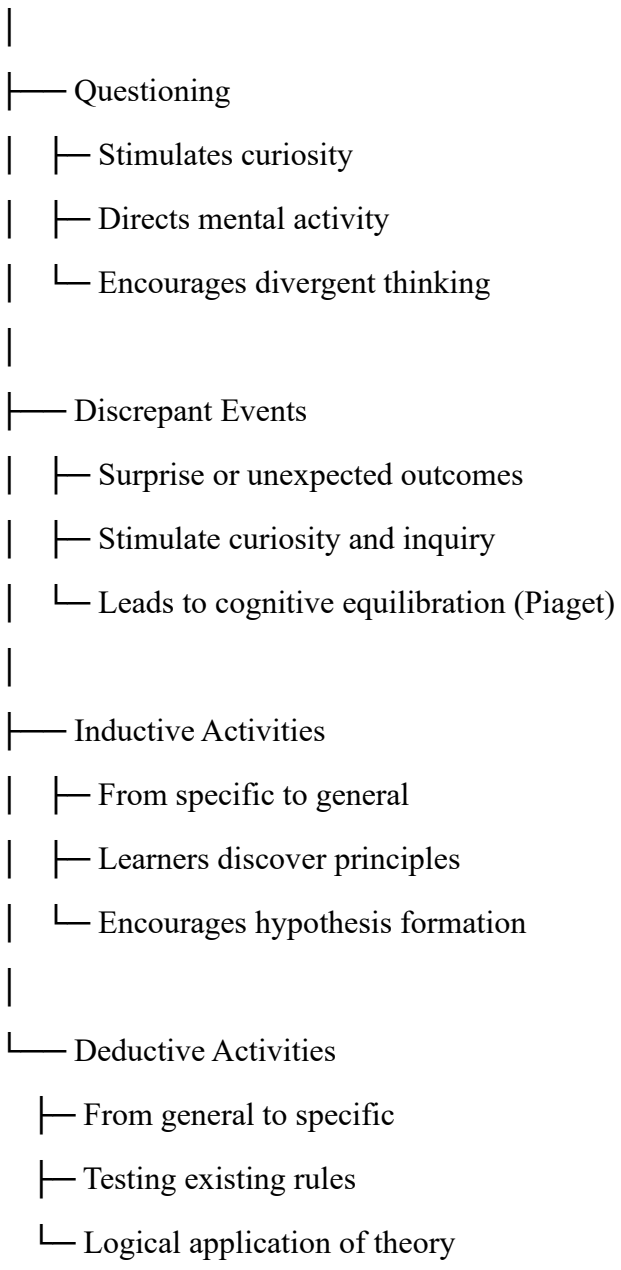
Inquiry and problem-solving instruction require **strategic questioning, critical observation, and active experimentation.**
Rather than memorizing facts, learners are guided through *how to think*, *how to question*, and *how to investigate*.

These strategies—**Questioning, Discrepant Events, Inductive and Deductive Activities**—help create an environment where learners **construct knowledge actively** and **develop scientific reasoning**.

"The art of teaching is the art of assisting discovery." — Mark Van Doren

(179) Mind Map: Inquiry & Problem-Solving Strategies

INQUIRY & PROBLEM-SOLVING STRATEGIES



(180) 1. Questioning Technique

Meaning

Questioning lies at the *heart of inquiry learning*. It activates thinking, sparks curiosity, and directs learners toward meaningful exploration.

When learners **formulate and respond to questions**, they engage deeply with concepts instead of passively accepting information.

Types of Questions

- **What / Where / When / Who** → *Factual recall*
- **Why / How** → *Causal and analytical thinking*
- **What if / Could / Might** → *Divergent and creative thinking*

Example 211:
While studying *photosynthesis*, a teacher asks:

- "Why do plants need sunlight?"
- "What would happen if there were no light for a week?"
- "Can artificial light replace sunlight?"

These progressively deepen understanding and inquiry.

Purpose

- Stimulate **curiosity** and engagement.
- Encourage **divergent thinking** — realizing more than one valid answer can exist.
- Guide **process skills** — observing, inferring, hypothesizing, experimenting.
- Help learners **reflect** and form new questions.

Inquiry thrives when questioning never ends — answers become new beginnings.

(181) 2. Discrepant Events

Meaning

A **discrepant event** is a surprising or puzzling situation that **contradicts what learners expect.**
It provokes curiosity and compels them to ask, *"Why did that happen?"*

This method aligns with **Piaget's theory of equilibration**, where cognitive conflict motivates learners to restore balance through reasoning and discovery.

Steps

1. **Demonstrate** an unexpected phenomenon.
2. **Ask learners** to observe carefully.
3. **Encourage discussion** — why did it happen?
4. **Guide inquiry** to reach scientific explanation.

Example 212:
Teacher dips a paper cup of water into a flame — surprisingly, it doesn't burn immediately.
Learners are puzzled → they hypothesize that water absorbs heat → teacher explains heat transfer.

Purpose

- Trigger curiosity and scientific questioning.
- Encourage learners to **rethink misconceptions**.
- Lead to **deeper conceptual understanding**.

Confusion, when guided, becomes the birthplace of understanding.

(182) 3. Inductive Activities

Meaning

In **inductive inquiry**, learners move **from specific observations to general principles.**
They encounter examples, identify patterns, and *construct* a concept or rule themselves.

This mirrors **scientific discovery**, where observation precedes theory.

Steps

1. Present **specific cases, examples, or data.**
2. Ask learners to **observe and find common patterns.**
3. Guide them to **formulate general principles or rules.**

Example 213:
A teacher provides examples of metals like copper, iron, aluminum — all conduct electricity.
Learners infer: *"All metals conduct electricity."*

Advantages

- Encourages **active participation** and reasoning.
- Promotes **hypothesis building** and creativity.
- Helps learners **own** their understanding rather than receive it.

Teacher's Role

- Select appropriate materials or examples.
- Facilitate pattern recognition and discussion.
- Ensure learners draw **valid and logical generalizations**.

Induction builds knowledge from the ground up — experience first, explanation next.

(183) 4. Deductive Activities

Meaning

The **deductive approach** begins with a **general principle or rule**, then moves toward **specific cases or verification.**
It is reasoning *from theory to practice.*

Steps

1. Present a **theory, law, or principle.**
2. Discuss and clarify its meaning.
3. Ask learners to **apply or test** it in real situations.
4. Reflect on whether results support the theory.

Example 214:
Teacher introduces *Newton's Third Law* ("Every action has an equal and opposite reaction").
Then students push against walls, use balloon rockets, and verify the principle through observation.

Advantages

- Builds **logical reasoning and application skills.**
- Helps learners understand **the utility of theories.**
- Useful for **testing and reinforcing** prior learning.

Inductive vs. Deductive Comparison

Aspect	Inductive Approach	Deductive Approach
Direction of Reasoning	From specific to general	From general to specific
Learner Role	Discoverer	Tester
Process	Observation → Pattern → Rule	Rule → Application → Verification
Example	Discovering that metals conduct electricity	Applying Ohm's law in circuits
Focus	Concept formation	Concept application

(184) Integration of Strategies

Effective inquiry teaching blends **all four strategies**:

- **Questioning** initiates curiosity.
- **Discrepant events** create motivation.
- **Induction** helps form generalizations.
- **Deduction** tests and applies them.

Example 215:
Topic: Air pressure

1. Teacher performs a **discrepant event** — inverted glass of water that doesn't fall.
2. Students **question** why it happens.
3. They **inductively infer** air pushes upward.
4. Then **deductively apply** the principle to explain how airplanes fly.

(185) Essence

Inquiry and problem-solving strategies transform classrooms into **laboratories of thought.**
They foster curiosity, experimentation, and resilience — essential traits for lifelong learners.

“The important thing is not to stop questioning. Curiosity has its own reason for existing.” — Albert Einstein

Group-centered methods

(186) Overview

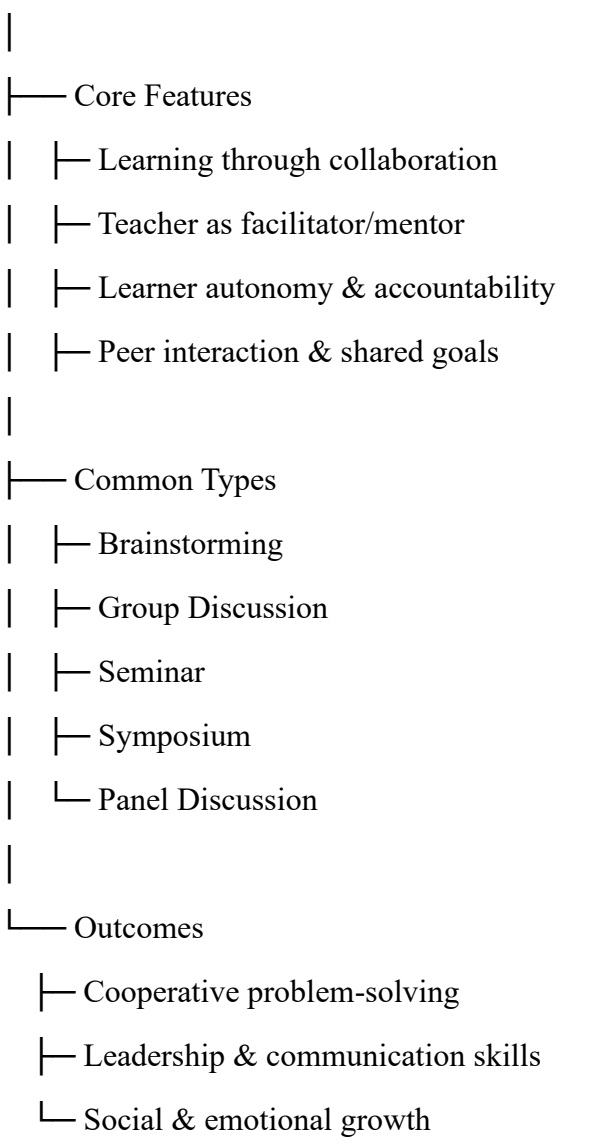
In any classroom, students naturally form a *group* — but a true **group-centered method** goes beyond merely teaching a class.
It emphasizes **collaboration, shared responsibility, autonomy, and accountability** among learners.

Instead of the teacher being the only source of direction, **learners plan, organize, and execute** the learning activity themselves — while the teacher steps back into the role of **facilitator, mentor, and guide**.

“Tell me and I forget. Teach me and I remember. Involve me and I learn.” — Benjamin Franklin

(187) Mind Map: Group-Centered Methods

GROUP-CENTERED METHODS



(188) Concept

Group-centered learning recognizes that:

- Every learner contributes unique perspectives.

- Shared thinking often leads to **deeper understanding** and **creative solutions**.
- Collaboration promotes **social maturity**, **communication skills**, and **team spirit**.

Unlike teacher-centered approaches, where knowledge flows one way, **group-centered methods create a network of exchange.**

Example 216:
In a Social Science class, the teacher divides students into groups to discuss *"How can we make our city cleaner?"*
Each group researches, debates, and presents solutions — while the teacher facilitates and provides guidance only when needed.

Brainstorming method

(189) BRAINSTORMING METHOD

(a) Meaning

Brainstorming is a **creative group technique** for generating a large number of ideas or solutions to a given problem.
It encourages "out-of-the-box" thinking, without immediate criticism or judgment.

Coined by **Alex F. Osborn (1942)**, brainstorming aims to **liberate imagination** and promote **divergent thinking.**

"It is easier to tone down a wild idea than to think up a new one." — Osborn

(b) Essence

- Focuses on **quantity of ideas** before evaluating quality.
- Promotes **collaborative creativity.**
- Relies on **freedom of expression** and **non-judgmental atmosphere.**

(c) Rules of Brainstorming

1. **Focus on Quantity**
   The more ideas produced, the higher the chance of finding innovative solutions.
   Quantity breeds quality.
2. **No Criticism**
   Every idea is accepted without judgment or rejection.
   Suspend evaluation until the end.
3. **Welcome Unusual Ideas**
   Encourage wild or unexpected suggestions — they often spark original solutions.
   Creativity thrives on risk.
4. **Combine and Improve Ideas**
   Merge or modify existing ideas for stronger results.
   "1 + 1 = 3" — synergy creates better outcomes.

(d) Procedure of Brainstorming

i. Set the Problem

- Define the problem clearly, often in the form of a question.
- If broad, divide into smaller parts.
  Example 217: "How can we reduce plastic use in our school?"

ii. Create a Background Memo

- Send a short note to participants with details of the session: topic, time, and place.
- Include brief examples or ideas to initiate thought.

iii. Select Participants

- Choose a small, diverse group (5–10 members ideal).
- Include both insiders and outsiders to the topic.
- Assign one **idea recorder** to document all suggestions.

iv. Create Lead Questions

- Prepare prompts to refocus participants if discussion slows:
  - "Can we combine two ideas?"
  - "What if we reversed this process?"
  - "Is there a simpler way?"

v. Conduct the Session

1. **Leader presents the problem.**
2. **Participants generate ideas** freely — rapid, spontaneous, without evaluation.
3. **Recorder notes down** all ideas visibly (on board or chart).
4. **Leader ensures energy, equality, and focus.**
5. **Combine, improve, and refine** the ideas collectively.
6. **Review the list** to clarify, categorize, and remove duplicates.
7. **Select the most promising ideas** for follow-up or testing.
8. **Appreciate all participants** for their creative input.

(e) Example in a Classroom

Topic: Environmental Studies
Problem: "How can we make our classroom eco-friendly?"

Sample Student Ideas:

- Reuse old notebooks.
- Decorate with recycled materials.
- Plant a class tree.

- Create an energy-saving awareness campaign.

After discussion, the class selects “Start a paper recycling box” as the best idea — combining feasibility and creativity.

(f) Advantages of Brainstorming

- Encourages **free expression** and creativity.
- Develops **team spirit** and confidence.
- Engages learners actively.
- Generates **multiple solutions quickly.**
- Reduces fear of being “wrong.”
- Helps learners practice **divergent and convergent thinking.**

(g) Limitations

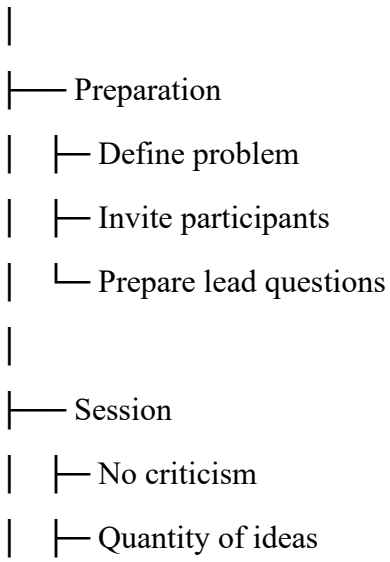
- May become **unstructured** or chaotic without firm guidance.
- **Dominant students** can overshadow others.
- Some ideas may be **impractical or irrelevant.**
- Requires a **skilled facilitator** to maintain focus and fairness.
- Not all topics suit brainstorming (e.g., factual or rigid subjects).

(h) Teacher’s Role

- Set clear problem boundaries.
- Maintain a **positive and non-judgmental atmosphere.**
- Encourage **equal participation** from all members.
- Help refine ideas **after the session** for practical use.

(i) Mind Map: Brainstorming Process

BRAINSTORMING



│ ├─ Record everything

│ └─ Encourage unusual ideas

│

└── Post-Session

├─ Review & refine ideas

├─ Select best solutions

└─ Appreciate contributions

(j) Essence

Brainstorming transforms the classroom into a **creative lab** — where imagination is valued over perfection. It empowers learners to **think together, explore widely, and innovate boldly.**

"None of us is as smart as all of us." — Ken Blanchard

Group-centered methods — cooperative learning and group activities

(190) Overview

Group-centered methods extend learning beyond individual achievement into the realm of **collaboration, shared inquiry, and peer responsibility.**
Among these, **Cooperative Learning** stands out as a deliberate, structured method to promote teamwork, empathy, and active participation.

It redefines classroom culture — from competition to cooperation, from teacher-led instruction to learner-driven discovery.

"We learn best not from isolation, but in dialogue with others."

(191) COOPERATIVE LEARNING

Meaning

Cooperative learning is a **structured form of group learning** in which students work together in small, heterogeneous teams to achieve shared academic goals.
Each learner contributes individually to the group's success — and the group's success depends on everyone's contribution.

Hassard (1990):

"Cooperative learning is a powerful instructional method in which groups of learners work together to solve problems and complete learning assignments."

(192) Key Elements of Cooperative Learning (Watson, 1992)

1. **Small groups:**
   Usually 2–7 members collaborating on a common task.
2. **Individual accountability:**
   Each learner contributes and is responsible for part of the task.
3. **Heterogeneity:**
   Groups are mixed by ability, gender, and background to promote inclusivity.

4. **Shared rewards:**
   Both group and individual efforts are recognized — reinforcing teamwork and cooperation.

(193) Steps in Conducting Cooperative Learning

Step 1: Organize Learners into Groups

- Decide on group composition based on task type.
- Ensure balance in ability and diversity.
- Clarify expected outcomes of the activity.

Example: Divide a class of 30 into 6 groups of 5 for a science project on renewable energy.

Step 2: Identify the Theme or Topic

- Choose a problem, idea, or project that encourages inquiry.
- Topics should connect to the syllabus yet allow creativity.
- Encourage brainstorming to refine the focus.

Step 3: Group Planning

- Each group drafts an outline or plan of action.
- Teacher reviews and provides suggestions.
- Assign specific roles (leader, recorder, presenter, etc.) to ensure equal participation.

Step 4: Monitor the Work

- Teacher observes, advises, and checks progress.
- Ask guiding questions like, *"What have you discovered so far?"* or *"How are you dividing tasks?"*

Step 5: Prepare Final Reports

- Help learners compile findings logically.
- Encourage visuals — charts, posters, slides, models.
- Emphasize collaboration and clarity of presentation.

Step 6: Presentation and Sharing

- Select one or more learners to present results before the class.
- This builds **confidence, communication skills**, and **peer feedback**.

Step 7: Evaluation

- Evaluate both **group outcomes** and **individual efforts**.
- Use a mix of teacher assessment and peer review.

Example 218:
Groups prepare presentations on "Water Conservation." Each member contributes — one collects data, another creates visuals, one writes the report, and one presents.

(194) Advantages of Cooperative Learning

1. **Enhanced participation:**
   Every member contributes to group decisions and discussions.
2. **Social and emotional growth:**
   Encourages empathy, cooperation, and respect for diverse opinions.
3. **Improved communication:**
   Learners learn to negotiate and resolve conflicts constructively.
4. **Learner autonomy:**
   Students make decisions and manage their own learning.
5. **Motivation and confidence:**
   Success shared as a group enhances morale.
6. **Peer learning:**
   Learners explain, question, and teach one another, deepening understanding.

Example 219:
In a cooperative group designing a community garden, students learn teamwork, planning, and sustainability concepts together.

(195) Disadvantages

1. **Classroom noise:**
   Discussions can become loud and chaotic without structure.
2. **Loss of control:**
   Teachers may feel their role has shifted too much to students.
3. **Unequal participation:**
   Some learners may dominate while others "ride along."
4. **Group mismatch:**
   Not all students enjoy group work — some prefer individual attention.

(196) Teacher's Role in Cooperative Learning

1. **Create a conducive atmosphere:**
   Encourage mutual respect, inclusivity, and trust.
2. **Guide, don't dictate:**
   Provide direction when needed but allow learner autonomy.
3. **Ensure accountability:**
   Use role distribution and progress checks to ensure fairness.
4. **Provide resources:**
   Offer materials, examples, and feedback at each stage.
5. **Evaluate with balance:**
   Assess both process (participation, teamwork) and product (quality of outcome).

(197) GROUP ACTIVITIES

Group activities keep classrooms alive — they promote **interaction, curiosity, and motivation.**
They transform passive learners into engaged participants.

(a) Think–Pair–Share

Steps:

1. **Think:** Learners individually reflect on a question posed by the teacher.
2. **Pair:** They discuss their thoughts in pairs.
3. **Share:** Pairs then share insights with the whole class.

Example 220:
Question: "Why is the ozone layer important?"
Students first think individually → discuss with a partner → share their collective reasoning.

Advantages:

- Engages all learners.
- Gives quieter students a voice.
- Provides quick feedback to the teacher.

(b) Role Play

Learners dramatize real or imagined situations related to a topic.
It builds empathy, creativity, and understanding of diverse perspectives.

Example 221:
Students reenact a *Parliament session* discussing a new environmental law.

Benefits:

- Encourages imagination and emotional involvement.
- Develops communication, leadership, and critical thinking skills.

(c) Jigsaw Method

Each student becomes an "expert" in one aspect of a topic, then teaches it to others.
The "puzzle" completes when every student contributes their piece of knowledge.

Steps:

1. Divide topic into subtopics (puzzle pieces).
2. Create expert groups to study each piece.
3. Reorganize into mixed groups to share expertise.
4. Each group compiles all insights to form the full picture.

Example 222:
Topic: *The Solar System*

- Group A: Planets
- Group B: Moons
- Group C: Asteroids and comets

- Group D: Space exploration
  Finally, new groups form where each member teaches their part to peers.

Benefits:

- Ensures active learning and interdependence.
- Reduces teacher dominance.
- Promotes mastery through teaching others.

(d) Circle of Voices

Each learner gets uninterrupted speaking time to express thoughts.
After everyone speaks once, open group discussion follows — only building upon what others said.

Purpose:

- Builds confidence and respect for every voice.
- Improves attentive listening.

(e) Snowball Groups / Pyramid Discussion

Learners start alone → pair → group of four → larger group.
They refine ideas progressively until reaching a consensus.

Benefits:

- Encourages reflection before collaboration.
- Gradually increases participation and complexity.

(f) Fishbowl

An inner group discusses or performs a task while the outer group observes and analyzes.
Afterward, roles are swapped.

Purpose:

- Enhances analytical and evaluative skills.
- Helps learners observe real-time group dynamics and argument structure.

Example 223:
Inner group debates "Should social media be banned in schools?"
Outer group observes tone, logic, and participation — then switches roles.

(198) Essence

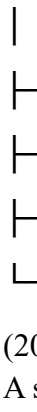
Group-centered methods — from cooperative learning to role play and jigsaw — make the classroom **a living, thinking community.**
They emphasize **participation, shared responsibility, and communication**, developing both intellect and character.

"Alone we can do so little; together we can do so much." — Helen Keller

(199) **Discussion Method — Short Notes (continued)**

Line mind map

DISCUSSION METHOD



(200) **Essence (one-line)**
A structured oral exchange guided by a leader in which participants analyze, compare, evaluate and co-construct understanding of a problem or topic.

(201) **Core characteristics (brief)**
• Group-centered and dialogic — learners speak & listen.
• Guided by a leader who frames, steers and summarizes.
• Aims at reflective thinking, clarification and collective judgment.
• Requires preparation (reading/thinking) and clear problem statement.
• Can produce agreement, disagreement, or refined viewpoints.

(202) **Components — who/what**

1. **Leader** — frames the problem, manages turn-taking, keeps discussion focused.
2. **Group** — ideally heterogeneous; each member contributes.
3. **Problem/Topic** — specific, relevant, and within learners' capability.
4. **Content & Evidence** — facts, examples, references learners draw on.

(203) **Procedure — concise steps**

1. **Plan**: leader decides purpose, scope and expected outcomes.
2. **Prepare**: participants read, collect data, note points/questions.
3. **Start**: leader states the problem and rules (time, turn-taking, respect).
4. **Explore**: members present views, ask questions, cite evidence.
5. **Synthesize**: leader and group clarify key points, weigh arguments.
6. **Evaluate/Conclude**: assess proposed solutions/ideas and state next steps.
7. **Follow-up**: assignments, reflections or further reading if needed.

(204) **Leader's micro-skills (what an effective leader actually does)**
• Pose clear opening questions.
• Invite quieter voices; limit dominators.
• Rephrase contributions to check understanding.
• Keep discussion on task; gently redirect when it derails.
• Summarize periodically and close with clear conclusions or tasks.

(205) **Advantages (short)**

• Clarifies thinking and exposes misconceptions.

• Builds speaking, listening and critical-thinking skills.

• Exposes learners to diverse perspectives.

• Encourages reflective learning and deeper understanding.

• Helps teachers discover learner talents and gaps.

(206) **Limitations / risks (short)**

• Can be dominated by a few voices if not managed.

• May go off-track or become emotional without rules.

• Not suitable for all topics (very factual/procedural content).

• Requires preparation time; assessment can be messy.

• Possible classroom noise and confusion if poorly organized.

(207) **Assessment pointers (how to evaluate a discussion)**

• Use a rubric: relevance, evidence used, clarity, listening, respect, contribution.

• Combine self, peer and teacher evaluation.

• Capture outcomes as a short-written summary or reflective note.

(208) **Practical tips — quick toolkit**

• Set ground rules (time, no interruptions, evidence required).

• Use thinking time: ask everyone to jot 1–2 points before speaking.

• Rotate roles: moderator, recorder, timekeeper, summarizer.

• Use prompts: “Who disagrees? Why?” / “What evidence supports this?”

• Close with a 2-minute written reflection (what I learned / my next question).

(209) **Five classroom examples (always 5)**

Example 224 — Secondary Science:

Topic: “Should school ban single-use plastics?”

Procedure: students prepare facts at home, leader opens with a question, pairs present pros/cons, whole class debates, group writes a short policy recommendation.

Example 225 — History (upper-secondary):

Topic: “Was the Industrial Revolution ultimately beneficial?”

Procedure: students assigned different perspectives (factory owner, worker, reformer), present arguments, leader probes causes and consequences, class synthesizes a balanced conclusion.

Example 226 — English/Literature:

Topic: “Does the protagonist deserve sympathy?”

Procedure: students cite textual evidence, compare interpretations, teacher spots and addresses misreadings, class votes on strongest readings and justifies choices.

Example 227 — Social Science / Civic Education:
Topic: "How should the local council allocate a limited budget?"
Procedure: groups research needs (education, sanitation, playgrounds), present proposals, discussion focuses on equity and feasibility, class drafts a prioritized budget.

Example 228 — Mathematics (conceptual discussion):
Topic: "Is there only one correct method to solve this problem?"
Procedure: students present different solution methods on the board, classmates question efficiency and generalizability, teacher highlights multiple valid approaches and when each is best.

(210) **Closing note (two lines)**
Discussion is a disciplined art: with clear framing, simple rules and active facilitation it converts talk into thinking. If you want, I'll draft a short 10-point rubric you can drop into your lesson plan to assess discussions — ready to paste.

(211) CONTEXT-SPECIFIC APPROACHES

Meaning

A *context-specific approach* in teaching means that **no single method fits every situation**.
Instead, the teacher chooses, adapts, and blends instructional methods according to the *context*—the learners, the content, the environment, and the goals.

Teaching, therefore, becomes a process of **constant reflection and flexible decision-making**, not the mechanical application of one fixed method.

"Effective teaching is context-driven, not method-driven." — Glickman (1991)

(212) Core Idea

Instruction links **objectives (what is to be learned)** with **outcomes (what learners become)**.
The *method of instruction* forms that bridge — and its success depends on how well it fits the *context*.

A context may include:

- **Learner differences** (age, background, ability, interests)
- **Learning environment** (resources, technology, class size)
- **Subject matter** (science vs. language vs. art)
- **Institutional goals** (curriculum expectations, evaluation style)

(213) Principles of Context-Specific Approaches

1. Instruction is Eclectic

- Teaching is not confined to one method or theory.
- Teachers select and blend different approaches (lecture, discussion, project, etc.) based on what works best.
- A *secure, risk-taking environment* allows teachers to experiment and innovate.

Example 229:
A history teacher uses lecture for factual background, group discussion for causes, and role play for historical debates — combining methods for fuller understanding.

2. Instruction Tied to Learning Success

- Teaching effectiveness is judged by *student learning*, not the number of strategies used.
- The teacher connects curriculum goals with classroom experience.
- Success depends on *reciprocal relationships* — learners actively participate and teachers respond dynamically.

Example 230:
In science, students design small experiments after a brief demonstration. Their engagement, not just test results, measures instructional success.

3. Instruction as Empowered Professional Practice

- Teachers are not technicians following manuals — they are professionals exercising **judgment**.
- Teachers must adapt lessons to suit learners' needs and contexts.
- Reflection and flexibility are key to empowerment.

Example 231:
If visual learners struggle with a text-heavy lesson, a teacher switches to diagrams and real-life models the next day — adapting midstream.

4. Integration with Core Curriculum

- Every instructional decision must align with curricular goals, themes, and essential learnings.
- Teachers consider *content, processes, perspectives,* and *skills* demanded by the curriculum.
- Instruction must also respect *individual differences* among learners.

5. Instruction as Generative and Dynamic

- Classrooms are living systems — each day's situation changes.
- Teachers must evolve continuously, using both *research knowledge* and *classroom experience*.
- Instruction is not static but a creative, ongoing experiment.

6. Instruction as a Continuous Cycle

Teaching is a **cycle** of:

1. Assessing learners' needs, interests, and abilities.
2. Planning suitable instructional methods.
3. Delivering lessons adaptively.

4. Evaluating learning outcomes.
5. Reflecting on one's own teaching.
6. Revising plans based on feedback.

Example 232:
A teacher notices learners struggling with abstract math problems → introduces manipulatives → reassesses understanding → refines strategy → repeats cycle.

7. Collaboration and Professional Growth

- Effective teaching grows through **shared practice**.
- Teachers improve by collaborating, observing, co-teaching, and reflecting together.
- Professional development (workshops, peer review, mentorship) sustains instructional quality.

(214) Summary Table (in prose)

In short:

- Teaching must be *flexible* (adapt to context).
- Methods must be *blended* (eclectic).
- Learners must be *active participants*.
- Teachers must be *reflective professionals*.
- Collaboration must be *ongoing*.

(215) Advantages of Context-Specific Approach

1. **Learner-centered:** Adjusts teaching to learners' unique contexts.
2. **Adaptive:** Encourages innovation and creativity in lesson delivery.
3. **Authentic:** Connects classroom learning to real-life situations.
4. **Reflective:** Improves teacher self-awareness and practice.
5. **Collaborative:** Promotes peer learning among teachers.

(216) Limitations

1. **Requires high teacher competence** — not all can adapt easily.
2. **Time-consuming** — reflection and adjustment take effort.
3. **Inconsistent results** — what works in one class may fail in another.
4. **Resource constraints** may limit flexibility in low-infrastructure schools.

(217) Example: Applying Context-Specific Approach

Scenario: A teacher in a rural school with limited internet access wants to teach "Global Warming."
Instead of using online videos, she uses:

- Newspaper clippings for visuals,
- Local examples of weather changes,

- A group discussion for analysis, and
- A student skit to reinforce understanding.

This adaptation respects *context* — using local resources and learner experience instead of external dependence.

(218) Essence

Context-specific teaching reminds us that **teaching is an art informed by science** — guided by research but rooted in real, living classrooms.
It thrives on reflection, responsiveness, and collaboration.

"There is no one best way to teach — only the best way for this learner, in this moment, for this goal."

Teaching-learning resources

(219) TEACHING–LEARNING RESOURCES

Concept Overview

Teaching–learning resources (TLRs) are the **tools, materials, and media** that a teacher uses to make learning **active, engaging, and effective**.
They help bridge the gap between **abstract ideas** and **real-world understanding**, making lessons more concrete, interesting, and memorable.

"A good resource in the hands of a thoughtful teacher can turn a dull topic into discovery."

(220) Changing Classroom Roles

Earlier classrooms placed learners in **passive roles** — listening quietly while the teacher "delivered" knowledge.
Today's classrooms, guided by **NCF–2005**, view learning as **child-centered and activity-based**.

Modern learners:

- are curious and participative,
- learn by doing, discussing, and exploring,
- expect interaction, not instruction.

The teacher's role has shifted from **instructor to facilitator**, helping learners engage with content through **resources and experiences**.

Teaching–Learning Resources

(221) Meaning of Teaching–Learning Resources

Teaching–learning resources are **materials or tools** that help teachers support, clarify, and enrich learning experiences.
They make abstract concepts **visible and understandable**, and help learners retain knowledge longer.

Simplified meaning:
Any material (physical, human, or digital) that aids in effective teaching and meaningful learning.

(222) Key Definitions

1. Klaus (2010):

“Teaching–learning resources are tools that classroom teachers use to help their learners learn quickly and thoroughly. A teaching aid can be as simple as a chalkboard or as complex as a computer program.”

2. Tamakloe, Amedahe & Atta (2005):

“Teaching–learning resources are materials used by the teacher to facilitate the learning, understanding, and acquisition of knowledge, concepts, principles, or skills by learners.”

3. Hayford (2013):

“Teaching–learning resources assist in and support learning. They help learners understand and enjoy lessons and allow teachers to assess learners’ understanding.”

4. Gross et al. (1971):

“Learning resources are facilities that stimulate learning and foster desirable behavioural changes.”

(223) Importance of Teaching–Learning Resources

1. **Stimulate interest and motivation:**
   Engaging visuals, objects, or digital content attract attention and curiosity.
   Example: showing a live plant instead of merely describing photosynthesis.
2. **Clarify complex concepts:**
   Abstract ideas become concrete when supported by visuals or demonstrations.
   Example: using a globe to explain Earth’s rotation and seasons.
3. **Enhance retention:**
   Learners remember what they see, touch, or do more easily than what they only hear.
4. **Encourage participation and creativity:**
   Using models, maps, or multimedia invites learners to discuss and interact.
5. **Provide variety:**
   Different materials break classroom monotony and address multiple learning styles.
6. **Promote self-learning:**
   Well-designed resources (like worksheets or simulations) guide independent exploration.

(224) Types of Teaching–Learning Resources

Teaching resources can be classified broadly into **three categories**:

1. Human Resources

People involved directly or indirectly in the teaching–learning process.
Includes teachers, students, guest speakers, community experts, librarians, and even parents.
Example: inviting a local farmer to explain irrigation methods in a geography class.

2. Material Resources

Physical or tangible materials that support learning.
Includes charts, models, maps, specimens, tools, textbooks, flashcards, and science kits.
Example: anatomical models in biology, or a weighing scale in physics.

3. Technological / Digital Resources

Modern electronic and online tools that make learning dynamic and interactive.
Includes computers, projectors, videos, e-books, educational apps, simulations, and smart boards.
Example: showing an animated video on the solar system or using a virtual lab.

(225) Principles for Using Teaching–Learning Resources

1. **Relevance:** Match the resource with lesson objectives.
2. **Simplicity:** Use materials that are easy to understand and handle.
3. **Variety:** Mix visuals, audio, and hands-on materials for better engagement.
4. **Learner Involvement:** Let learners handle or interact with the resources.
5. **Availability & Cost-effectiveness:** Prefer locally available, low-cost materials.
6. **Accuracy:** Ensure resources convey correct and updated information.
7. **Integration:** Use the aid as part of teaching — not as decoration or distraction.

(226) Teacher's Role in Using Resources

1. **Designer:** Selects or creates materials according to lesson goals.
2. **Facilitator:** Encourages learners to use resources actively.
3. **Organizer:** Arranges materials in logical sequence and manages usage.
4. **Evaluator:** Assesses how effectively the resource supported learning.
5. **Innovator:** Adapts or creates new aids using available materials.

Example: A teacher making flashcards from old magazines to teach vocabulary.

(227) Advantages of Teaching–Learning Resources

- Make learning **concrete, realistic, and meaningful.**
- Save time by **simplifying complex explanations.**
- Support **activity-based and experiential learning.**
- Encourage **collaboration and discussion.**
- Allow **inclusive education**—helping different learners (visual, auditory, kinesthetic).

(228) Limitations or Challenges

- **Cost and availability:** Some resources may be expensive or hard to obtain.
- **Technical issues:** Digital tools require electricity and maintenance.
- **Teacher training:** Not all teachers are skilled in using modern aids.
- **Overdependence:** Too much reliance on resources can reduce teacher–learner interaction.
- **Time management:** Preparing and using aids requires planning and classroom control.

(229) Examples of Common Teaching–Learning Resources

Subject	Example Resource	Purpose
Science	Charts, models, lab kits	To visualize and experiment
Geography	Maps, globes	To understand spatial relations
Mathematics	Geometrical instruments, flashcards	For concrete demonstration
Language	Flashcards, puppets, audio clips	To enhance pronunciation and vocabulary
History	Timelines, artefacts, documentaries	To bring the past alive

(Formatted in prose as per your preference)

(230) Summary

Teaching–learning resources transform the classroom from **teacher-talk** to **student-action**. They help learners think, explore, and construct knowledge — the heart of active learning.

"Resources don't teach; teachers do. But teachers who use resources wisely, teach better."

(231) IMPORTANCE OF RESOURCES IN TEACHING–LEARNING

Concept Reminder

Teaching–learning resources are the **tools, materials, or media** that a teacher uses to make learning **effective, lasting, and engaging**.
They connect what is *taught* to what is *experienced* — moving the learner from hearing, to seeing, to doing.

Chinese Proverb:
"What I hear, I forget; what I see, I remember; what I do, I understand."

This captures exactly why teaching–learning resources are indispensable.

(232) Importance of Teaching–Learning Resources

i. Aid to Memory and Retention

Forgetting is natural, but visual and sensory experiences make concepts stick.

When learners *see* and *interact* with materials, they retain information longer.

Example: a student who builds a working model of a water cycle remembers the process better than one who only reads about it.

ii. Motivation and Interest

Learning materials draw attention and create curiosity.

When teachers use colourful visuals, sounds, or hands-on tools, learners become active and eager to learn.

Example: showing a short animated video before explaining a topic boosts engagement.

iii. Multi-sensory Learning

Effective learning happens when multiple senses are involved — seeing, hearing, touching, and doing.

These experiences form stronger mental images and deeper understanding.

Example: in a biology lab, observing (seeing), dissecting (doing), and discussing (hearing) reinforce the same concept.

iv. Clarification of Content

Teaching resources help explain difficult ideas simply and clearly.

They make abstract concepts concrete.

Example: using a globe to clarify how day and night occur rather than just explaining verbally.

v. Direct Experience

Some resources offer real-life or simulated experiences, helping learners connect classroom learning with real-world situations.

Example: field trips, experiments, or live demonstrations give learners firsthand knowledge.

vi. Creating Interest and Motivation

Interesting materials capture attention, making the environment lively and reducing boredom.
Learners feel emotionally and intellectually involved. *Example:* interactive games and quizzes during lessons keep students alert and enthusiastic.

vii. Support for Conceptual Understanding

Resources like charts, models, and diagrams illustrate relationships, helping learners form correct mental frameworks.

Example: a chart showing the food chain visually conveys energy flow better than text alone.

viii. Vocabulary Building

Visual and audio materials expose learners to new terms in context, improving language comprehension.

Example: picture flashcards help early learners associate words with images.

ix. Active and Lively Classroom Environment

Teaching–learning resources transform a dull class into an interactive session where learners participate and respond.

Example: smartboard quizzes or hands-on experiments spark engagement.

x. Time and Cost Efficiency

A well-planned resource can save repetition and explanation time. It also prevents waste by promoting efficient learning.

Example: a short instructional video can explain a complex process faster than multiple blackboard explanations.

Types of teaching–learning resources

(233) Types of teaching–learning resources

Teaching aids can be classified in several ways, but most commonly they are divided into **Audio**, **Visual**, and **Audio-Visual** resources.

a. Audio Teaching–Learning Resources

These rely on the *sense of hearing* and are used to develop listening and comprehension skills.
Examples:

- Radio programs
- Tape recorders

- Audio CDs
- Educational podcasts
- Gramophones

Use Case: Listening to a radio talk on environmental conservation helps learners understand pronunciation and tone while grasping content.

b. Visual Teaching–Learning Resources

These appeal to the *sense of sight* and help visualize abstract information.
Examples:

- Charts and posters
- Flashcards and maps
- Models and real objects
- Pictures and drawings
- Chalkboard and flannel board
- Bulletin board
- Overhead projector slides

Use Case: Using a map in geography or a timeline in history improves visual memory and understanding of relationships.

c. Audio–Visual Teaching–Learning Resources

These combine *hearing and seeing*, offering richer and more immersive experiences.
Examples:

- Television
- Educational films and documentaries
- Film strips and slide projectors
- Audio-video CDs
- Multimedia lessons and smart classrooms

Use Case: Watching a documentary on volcanoes allows learners to *see* eruptions and *hear* explanations simultaneously — creating deeper understanding.

(234) Summary

Teaching–learning resources are **the lifeblood of active learning**.
They turn classrooms into spaces of exploration rather than instruction.
They appeal to multiple senses, sustain curiosity, and ensure that learning isn't just remembered — it's understood.

"A resource-rich classroom is not one with expensive tools,
but one where every tool—simple or digital—brings learning to life."

Learner and their environment as learning resources

(235) LEARNER AND THEIR ENVIRONMENT AS LEARNING RESOURCES

Core Idea

Albert Einstein once said:

"I never teach my pupils; I only attempt to provide the conditions in which they can learn."

That *condition* — the environment — becomes the **greatest learning resource**.
When the classroom, community, and relationships are structured around the learner, learning stops being a passive act and becomes an active, personal process.

(236) Meaning of Learner-Centered Environment

A **learner-centered environment** focuses on how students learn rather than how teachers teach.
It emphasizes curiosity, interaction, reflection, and connection to real-life experiences.

The traditional *"sage on the stage"* has now evolved into a *"guide on the side."*
Teachers act as facilitators, mentors, and co-learners. Learners become **active participants**, constructing knowledge through experiences, collaboration, and inquiry.

Example:
Instead of memorizing pollution types, students go outside to collect air samples, observe, discuss, and draw conclusions — turning their surroundings into a learning lab.

(237) Importance of Environment as a Learning Resource

A **learning environment** is not limited to physical space.
It includes everything — from classroom layout and temperature to relationships, technology, community, and feedback.
When designed thoughtfully, it becomes a *living resource* that stimulates engagement and deeper understanding.

(238) Ways to Make the Learning Environment Resourceful

1. Feedback as a Learning Tool

Feedback is more than correction — it's communication.
Personalized, timely, and constructive feedback helps learners understand their strengths and areas for improvement.
Research (McCombs, 1997–2000) shows that **positive feedback** creates a motivating climate and strengthens the teacher–learner bond.

Example: A teacher writing personalized notes on assignments instead of generic grades builds learner confidence.

2. Experience-Based Learning

Learning through experiences — projects, simulations, community visits — makes learning meaningful.
Good experiences during lessons cultivate positivity and enhance understanding.

Example: Taking students to a local water plant to study purification methods connects theory with real life.

3. Use of Technological Tools

Modern technology turns ordinary classrooms into dynamic, learner-driven spaces.
Digital platforms, multimedia presentations, virtual labs, and interactive boards empower creativity and autonomy.

Example: Students using tablets to document a science experiment and share results online.

4. Knowing the Learners Personally

A teacher who knows learners by name and background can connect content to their experiences.
It builds trust, increases participation, and makes the classroom feel inclusive and human.

Example: A teacher referencing a student's hometown while teaching geography.

5. Adapting Teaching Style to Learner Needs

Every learner is unique — some learn by hearing, some by seeing, others by doing.
Effective teachers balance lectures, discussions, demonstrations, and hands-on activities to reach all learners.

Example: Combining short lectures with peer teaching or group problem-solving.

6. Making Content Relevant

Learners should know *why* a topic matters.
When lessons connect with personal interests, community issues, or career goals, motivation increases.

Example: Teaching chemistry concepts through "kitchen experiments" at home.

7. Active Teacher Role

A dynamic teacher sets the tone of the environment.
Active teaching through humour, storytelling, movement, and genuine enthusiasm transforms passive classes into learning communities.

"When a teacher stands, learners sit; when a teacher sits, learners lie down."
– This proverb reminds teachers that *their energy fuels the classroom.*

8. Sharing Passion and Personality

Teachers who share personal experiences or real-life examples humanize learning.
Gestures, eye contact, and tone can turn even a large class into an intimate learning space.

Example: A teacher using personal travel stories while teaching geography to spark curiosity.

9. Providing Acceptable Challenges

Tasks that are slightly above learners' current ability motivate them.
Challenging but attainable goals build confidence and persistence.

Example: Assigning a mini research project that stretches students' thinking but offers guidance along the way.

10. Encouraging Self-Evaluation

Let learners assess their own progress.
When they judge their own work, reflection deepens and ownership increases.

Example: After a group project, each member writes what they learned and how they contributed.

11. Learner Support

Support extends beyond content delivery.
It includes emotional, social, and academic guidance — helping learners handle challenges and stay motivated.

Example: A teacher checking in privately with struggling students or organizing peer tutoring.

12. Logical and Structured Learning

Learners benefit from clarity — clear objectives, rubrics, and step-by-step assignments.
Structure reduces confusion and anxiety, creating a supportive environment.

Example: Providing a written rubric before a presentation.

13. Active Learning Strategies

Techniques like **peer instruction**, **debate**, **project-based learning**, and **DIY experiments** convert classrooms into active learning zones.

14. Physical Environment: Temperature, Seating, Light

Comfort affects concentration.
Proper lighting, ventilation, and seating arrangements foster focus and collaboration.

Example: Flexible seating (circles, small groups) encourages discussion.

15. Scheduled Breaks

Attention has limits.
Short breaks refresh the mind and sustain energy levels — especially for long sessions.

(239) Summary

A resourceful learning environment is **not bought — it's built**.

It grows through feedback, relationships, relevance, and thoughtful design.

When learners are engaged with content, with peers, and with their teacher, the classroom itself becomes a resource — alive, responsive, and inspiring.

"A learning environment is successful when both teacher and learner stop counting minutes — and start losing themselves in curiosity."

(240) CLASSROOM AS A RESOURCE

Core Thought

"I'm a teacher and my classroom is filled with a range of learners with different needs and goals." — *Marietta*

A classroom is not just a room—it is a **living ecosystem of learning**.

Every wall, tool, relationship, and interaction inside it can become a **teaching–learning resource** when a teacher knows how to use it well.

The most powerful resource, however, is still the **teacher**—the one who transforms a static environment into a dynamic learning space.

(241) Concept of Classroom as a Resource

A **classroom resource** includes *anything* that a teacher uses within the classroom to enhance learning. From blackboards to body language, from seating arrangements to technology—every element has potential to support education.

A resourceful classroom is not defined by the **number of tools**, but by **how creatively those tools are used** to meet diverse learner needs.
The teacher's role is to turn even ordinary materials into opportunities for thinking, questioning, and understanding.

Example:
A chalkboard, some paper, and open discussion can together produce more learning than a poorly used smartboard.

(242) The Teacher: The Central Resource

Dealing with a diverse group of learners—each with different skills, pace, and backgrounds—is complex. A teacher's creativity, competence, and empathy are what convert an ordinary classroom into a **resource-rich learning zone**.

Teachers who adapt methods, vary materials, and create inclusive environments make learning meaningful for all.
Their expertise determines how effectively every other resource functions.

(243) Grubb's Four Categories of Classroom Resources (2008)

Grubb identified **four interlinked categories** of classroom resources that directly influence learners' achievement and continuity in education:

1. Simple Resources

These are **basic physical materials** or measurable elements of the classroom setup.

Examples:

- Textbooks
- Chalkboard and chalk
- Projector or technological tools
- Teacher–student ratio
- Teacher's qualifications and experience

These are visible, purchasable, and directly usable objects or factors in teaching.

2. Compound Resources

These involve the **combination of two or more simple resources** that work together for better results.

Examples:

- Small class size *plus* well-trained teacher

- Technology integrated *with* effective pedagogy
- Science lab equipment *and* skilled lab instructor

Learning improves when these factors are coordinated instead of isolated.

3. Complex Resources

These are **intangible yet powerful**—the methods, philosophies, and approaches that shape classroom culture.

Examples:

- Interactive teaching strategies
- Constructivist or inquiry-based learning
- Assessment for learning rather than of learning

Such resources cannot be "bought" but are cultivated through training, reflection, and teaching experience.

4. Abstract Resources

These are **deeply embedded** in school culture, relationships, and shared values.

Examples:

- Collegial decision-making
- Peer support among teachers
- Leadership and internal accountability
- Shared trust between teachers and learners

They sustain a healthy learning environment over time.

(244) Developing the Classroom as a Resource Room

To transform a conventional classroom into a **resource room**, a teacher can focus on several key areas:

i. Teacher Competence and Belief (Judson, 2006)

Innovation begins with the teacher.
Even the best technology or materials are meaningless if not effectively implemented.
Teachers must be confident, well-prepared, and skilled in using educational tools, technologies, and pedagogies.

"Teacher self-efficacy and mindset determine whether a classroom is merely equipped—or truly alive."

ii. Mastery of Traditional Tools

The humble chalkboard remains one of the most powerful teaching tools.
When used skillfully, it supports clarity, sequencing, and learner engagement.

Effective Blackboard Use Includes:

- Writing key points neatly and systematically
- Drawing diagrams, charts, and flow maps
- Highlighting keywords with coloured chalks

- Inviting learners to solve problems on the board

A teacher who can **think, draw, and explain simultaneously** holds the class's attention naturally.

iii. Teacher's Techniques and Attributes

Expert teachers blend **technique, creativity, and flexibility**.
They handle class complexity with grace and adapt methods based on learners' level, age, and background.
Their behaviour, communication, and enthusiasm are contagious resources.

iv. Innovative Teaching Methods

Teachers should employ **active and creative strategies**:

- For lower classes: phonics, storytelling, songs, letter games
- For higher levels: debates, projects, problem-solving tasks, simulations

Each technique enriches the classroom with engagement and diversity.

v. High-Quality Instruction (Cohen, Raudenbush & Ball, 2002)

The classroom becomes resourceful when **instruction** connects four key elements:

Teacher ↔ Learner ↔ Content ↔ Environment

The quality of learning depends on how effectively these elements interact.
A well-prepared lesson plan, engaging content, and positive relationships make instruction powerful and lasting.

vi. Physical Layout and Space

Classroom design directly affects attention, comfort, and communication.

Findings (Marx et al., 1999):

- **Semicircle or cluster seating** promotes discussion and inclusion.
- **Traditional rows** can restrict participation and isolate students.
- Students in the "T-zone" (front and center) usually receive more attention.

A thoughtful layout ensures all learners are visible, heard, and valued.

vii. Peer Interaction and Collaboration

Peer-to-peer communication strengthens understanding and builds confidence.
Teachers should create opportunities for learners to discuss, debate, and present ideas.
This transforms the class into a **learning community**, not a passive audience.

viii. Smart Class and Technology Integration

Smart classrooms use digital tools—**interactive whiteboards, projectors, and video conferencing**—to connect learners and content.

Benefits:

- Visual and auditory engagement
- Access to global learning resources

- Encouragement of independent exploration

However, technology is effective only when guided by thoughtful pedagogy.

ix. Teacher Preparedness and Emotional Climate

A teacher's **lesson planning, attitude, and emotional balance** deeply affect classroom atmosphere.
Warmth, humour, empathy, and fairness make the space psychologically safe for learners.

When students feel respected and supported, they take intellectual risks—asking, exploring, creating.

x. Evaluation and Resource Assessment

Before using materials or methods, a teacher must evaluate:

- Relevance to lesson goals
- Suitability for learner age and background
- Cost-effectiveness and safety
- Alignment with curriculum objectives

Resources are only as useful as their connection to learning purpose.

(245) Summary

A classroom becomes a **resource** not through equipment but through *intentional design and human energy*.
Every object, sound, and gesture can contribute to learning when guided by an inspired teacher.

"A classroom is not four walls with a board—it is a living, breathing resource shaped by the teacher's imagination."

(246) COMMUNITY AS A LEARNING RESOURCE

Core Thought

"After family, society and community play the greatest role in education."

Community is not just the background of a learner's life — it's a **living classroom**.
It teaches through people, places, traditions, and experiences that cannot be recreated within four walls.
When schools and communities collaborate, learning becomes authentic, relevant, and rooted in real life.

(247) Meaning and Significance

A **community** includes the people, institutions, and natural surroundings where learners live and interact.
It serves as a **dynamic, informal educational space**—rich with social, cultural, and environmental lessons.

Using the community as a learning resource:

- Builds connections between **school and society**.
- Develops civic awareness, empathy, and responsibility.
- Makes education more practical and life-centered.

Example:
Students visiting a local dairy farm not only learn science (food processing) but also economics, cooperation, and sustainability.

(248) Importance of Community in Learning

1. **Bridges School and Real Life** – Learning extends beyond textbooks into daily experiences.
2. **Supports Holistic Development** – Learners gain social, moral, and civic values.
3. **Promotes Experiential Learning** – Students learn by doing and observing.
4. **Fosters Belonging and Civic Responsibility** – Learners become contributors to their community, not just observers.
5. **Provides Free and Diverse Resources** – The community offers local expertise, materials, and sites at little or no cost.

(249) Ways to Use Community as a Learning Resource

1. Guidance Services

Community members can serve as **mentors or advisors**.
Elders, professionals, and local experts can offer career and life guidance where schools lack formal counseling setups.

Example:
A retired engineer guiding students on choosing STEM careers or teaching them practical applications of science.

2. Guest Lectures

Schools can invite **experts from different fields**—doctors, artists, scientists, social workers, or athletes—to share experiences.
These sessions expose learners to diverse perspectives and role models.

Example:
A doctor discussing adolescent health or a sportsperson inspiring students about discipline and teamwork.

3. Community Participation

Learners engage in **hands-on, real-world projects** within their community.
This fosters practical learning, leadership, and social awareness.

Examples:

- Conducting a cleanliness survey with a local NGO.
- Interviewing village elders about traditional practices.
- Participating in a local tree plantation drive.

4. Citizen Action

Learners apply classroom knowledge to **create social change**.
Through projects, campaigns, or volunteering, they develop agency and empathy.

Examples:

- Making posters or short films on waste segregation.
- Organizing awareness rallies on gender equality or health.
- Volunteering at an orphanage or old-age home.

5. Instructional Connections

Teachers can relate **classroom lessons to local issues** for better understanding.

Examples:

- Teaching democracy through local panchayat elections.
- Linking geography lessons with local rivers and landforms.
- Discussing economics through nearby small-scale industries.

This makes learning contextual and memorable.

6. Libraries

Community, public, or private libraries offer access to additional reading material not found in school libraries.
They promote **independent learning habits** and broaden intellectual horizons.

Example:
Students using the district library for project research or reading regional literature.

7. Nature Centres

Nature centres serve as **environmental classrooms** offering workshops, field activities, and apprenticeships.

Example:
Students attending a bird-watching program to learn about ecosystems and biodiversity.

8. Museums and Historical Sites

Museums and heritage sites make **history come alive**.
Students observe artifacts, exhibitions, and monuments that enrich their understanding of past civilizations.

Examples:

- Visiting an archaeology museum to understand the Indus Valley Civilization.
- Exploring a local fort or palace to learn about regional history and architecture.

9. Art Centres

Community art centres offer classes in painting, crafts, theatre, and music—nurturing creativity and cultural appreciation.

Example:
Learners joining weekend pottery or folk dance workshops to explore artistic expression.

10. Volunteering Opportunities

Through community service, learners experience **real human values**—compassion, teamwork, empathy, and tolerance.

Examples:

- Volunteering in blood donation drives.
- Helping during local festivals or health camps.
- Mentoring younger children in neighbourhood study groups.

These experiences shape not just intellect but character.

11. Science and Nature Institutions

Places like **science centres, botanical gardens, aquariums, and zoos** can become active learning spaces.

Example:
Learners observing animal habitats or conducting biodiversity surveys during field visits.

(250) Advantages of Using the Community as a Resource

- Connects theory with practice.
- Makes learning participatory and experiential.
- Builds moral and civic sense.
- Utilizes local wisdom and skills.
- Strengthens the bond between school and society.
- Reduces educational costs through locally available materials.

(251) Challenges

- Teachers may lack time or training to plan community-based activities.
- Logistical issues like transportation or safety may arise.
- Community cooperation can vary depending on interest and availability.

Yet, with creativity and support, these barriers can be overcome.

(252) Summary

Community is the **largest open textbook** a learner will ever have.
When schools draw learning from the world outside their walls, they teach relevance, responsibility, and reflection.

"The best classroom has no walls—it has streets, parks, farms, libraries, and people."

Community-based education transforms learning into living.

(253) IMPROVISED RESOURCES

Core Thought

"Improvisation is the art of making the best out of what is available."

A good teacher doesn't wait for perfect materials — they **create** learning experiences with what they have.
Improvised resources turn limitations into opportunities, and scarcity into creativity.
They make teaching not just possible, but *lively, local,* and *real*.

(254) Meaning and Concept

Improvised resources are **teaching-learning materials developed from locally available or alternative resources** when standard or readymade aids are unavailable or unaffordable.

Improvisation involves **creativity, innovation, and adaptability** — using familiar, low-cost materials to create effective instructional tools.

Example:
Using plastic bottles as laboratory flasks, or cardboard to make geometric shapes for math lessons.

(255) Definitions

- **Tikon (2006):**
  "Improvisation is the act of using alternative resources to facilitate instruction wherever there is lack or absence of specific firsthand teaching aids."
- **In simple words:**
  Improvisation means combining available materials in a new way to serve a teaching purpose.

It is not just substitution — it is *creative construction.*

(256) Need for Improvisation

- High cost or scarcity of commercial teaching aids.
- Unequal access to modern facilities, especially in rural or resource-poor schools.
- Need to make teaching more participatory, local, and relevant.
- Encouragement of hands-on, discovery-based learning.

Improvisation ensures that **no classroom is left behind**, regardless of economic or infrastructural challenges.

(257) Nature of Improvisation

Improvisation can be:

- **Spontaneous ("on the spot")** – adapting immediately during a lesson.
- **Planned and crafted** – creating teaching aids before class using local materials.

It can apply across subjects — science, art, mathematics, language, and even social studies.
An improviser teacher is **resourceful, artistic, and practical**, capable of transforming everyday items into learning tools.

(258) Role of the Teacher in Improvisation

A teacher plays a central role in developing, selecting, and applying improvised resources.
The key lies in **creativity + technical skill + subject knowledge.**

Teachers can use the following as improvised materials:

1. **Writing and lettering skills** – Pen lettering, calligraphy, or freehand writing to create attractive displays.
2. **Use of colours and graphics** – Colour-coded charts, diagrams, and illustrations to emphasize key ideas.
3. **Model-making and craftwork** – Clay, cardboard, thermocol, paper, or recycled items for subject models.
4. **Blackboard and chalk** – The oldest but still powerful visual teaching resource.
5. **Blank maps** – Used for geography or history exercises.
6. **Textbooks and reference books** – Used not just for reading but for comparison and discussion.
7. **Mathematical tables, log books** – Reference tools for problem solving.

8. **Newspapers and magazines** – For current affairs, reading comprehension, and social awareness.
9. **Cardboard and waste materials** – For project models, charts, and cut-outs.
10. **Mobile phones** – For accessing information, audio clips, and educational apps.

Example:
A teacher can cut out letters from coloured paper to make a word wall, or use sand and stones to teach counting in an early math class.

(259) Developing Skills for Improvisation

To create effective improvised materials, teachers should:

- Participate in **seminars, workshops, and training programs** on material development.
- Collaborate with peers to share ideas for local resource creation.
- Practice **design principles**—clarity, simplicity, proportion, and visual appeal.
- Encourage learners to help in collecting materials and constructing aids.

Example:
A science teacher can train students to reuse old bulbs as miniature models of round-bottom flasks.

(260) Advantages of Improvised Resources

1. **Cost-effective:**
   Locally sourced materials are inexpensive and often free.
2. **Accessible:**
   Easily available materials make it possible to prepare aids even in low-resource areas.
3. **Participatory and Motivating:**
   Learners take part in making the materials, which builds ownership and engagement.
4. **Promotes Creativity and Innovation:**
   Teachers and learners develop problem-solving and design skills.
5. **Contextual Learning:**
   Materials reflect learners' own environment, making learning relatable and meaningful.
6. **Class Participation:**
   Since resources are familiar, all learners can engage and contribute.
7. **Large Class Utility:**
   Improvised aids can be designed for group learning or demonstration in large classes.

Example:
In a science lesson, bottle caps, matchboxes, and straws can replace costly lab kits to demonstrate physical principles.

(261) Conclusion

Improvised resources are the **soul of creative teaching**, especially where funds or facilities are limited. They reflect the teacher's imagination and commitment to make learning *possible for everyone*.

"A teacher who can improvise never runs out of tools — only of excuses."

Improvisation transforms the classroom into a workshop of curiosity and collaboration, proving that great teaching depends not on what you have, but on **how you use it.**

(262) ICT AND MULTIMEDIA AS LEARNING RESOURCES

Core Thought

"Technology will not replace teachers, but teachers who use technology well will replace those who do not."

Information and Communication Technologies (ICT) and multimedia have transformed classrooms into dynamic, interactive, and global learning spaces.
They help both teachers and learners to **access, create, and share knowledge** beyond physical boundaries.
ICT is not just a tool—it's a bridge between traditional learning and the digital world.

(263) Meaning and Concept

ICT (Information and Communication Technologies) refers to all digital tools and systems used to **capture, store, process, and communicate information** electronically.
When combined with **multimedia** (integration of text, audio, visuals, animation, and video), ICT becomes a powerful medium for **active, engaging, and self-paced learning**.

According to the *Primary School Curriculum (1999, p.29)*:

"Technological skills are increasingly important for advancement in education, work, and leisure. The curriculum integrates ICT into the teaching and learning process and provides opportunities for children to use modern technology to enhance their learning in all subjects."

(264) Use of ICT in Teaching and Learning

ICT can be used in **three distinct ways** within education:

1. **ICT as an Object of Study**
   Learners study ICT itself as a subject — developing basic computer literacy and digital skills.
   Example: Learning how to use Word processors, spreadsheets, or coding software.
2. **ICT as an Aspect of a Discipline or Profession**
   ICT is integrated into vocational or subject-specific skills.
   Example: Using design software in architecture or simulation tools in science labs.
3. **ICT as a Medium of Teaching and Learning**
   ICT becomes the **means** of instruction — supporting teachers to present, demonstrate, and assess.
   Example: Using digital whiteboards, videos, and online quizzes in class.

(265) Components of ICT and Multimedia Tools

ICT and multimedia tools are generally divided into **three categories**:

1. Input Tools

Used for entering data or capturing visuals.
Examples:

- Document or visualizer camera
- Computers and tablets
- Application software (Word, Excel, Google Classroom)

2. Output Tools

Used for displaying or presenting content.
Examples:

- Projector
- Monitor or television
- Interactive whiteboard

3. Other Tools

Assist in creating, storing, or transmitting information.
Examples:

- Digital camera
- Audio recorder or switcher
- Digital storage devices

(266) Role of UNESCO

UNESCO developed the **"Training Guide on ICT Multimedia Integration for Teaching and Learning"** to support teacher training globally.
This guide helps educators effectively integrate ICT and multimedia tools in their classrooms through workshops and practical modules.

(267) Advantages of Using ICT and Multimedia

The use of ICT in education offers **flexibility, accessibility, and creativity** to both teachers and learners.
Let's explore its main advantages:

1. Enhances Active and Independent Learning

Learners can **find, manage, and evaluate** information from multiple sources (e.g., the internet, digital libraries, CD-ROMs).
They develop **research and problem-solving skills**, leading to self-directed learning.

Example: Students prepare a project using online data, charts, and multimedia presentations.

2. Encourages Collaboration and Communication

ICT tools like **email, video conferencing, and discussion forums** allow learners to exchange ideas across regions and cultures.

Example: A virtual debate or collaborative project between schools in different countries.

3. Extends Learning Beyond the Classroom

ICT allows learning anytime and anywhere — before, during, or after school hours.
E-learning platforms and recorded lectures make continuous learning possible.

Example: Students revising lessons through school portals or recorded sessions.

4. Supports Visual and Experiential Learning

Multimedia materials (videos, images, simulations) help learners visualize complex ideas.
They make abstract concepts concrete and enhance understanding.

Example: Animated science experiments showing molecular reactions or space simulations.

5. Improves Record-Keeping and Assessment

Teachers can use digital tools to track learner progress through **e-portfolios, charts, and reports**.
ICT helps maintain detailed records for personalized feedback.

6. Encourages Creativity and Expression

Learners can use tools like **PowerPoint, Canva, audio recorders, and video editors** to design projects and express their ideas creatively.

7. Promotes Authentic and Global Learning

Internet-based resources and virtual field trips allow learners to explore **real-world content** beyond textbooks.

Example: Exploring the Louvre Museum online, or watching live space missions via NASA's website.

8. Builds Social and Soft Skills

Group projects involving ICT encourage **collaboration, patience, and leadership**.
Learners share digital resources and help each other solve technical challenges.

(268) ICT for Teachers

ICT benefits teachers as much as learners. It supports them in **preparation, professional growth, and connection** with wider networks.

1. For Initial Teacher Preparation

ICT provides:

- Access to **high-quality training materials**
- Simulations for practice teaching
- Opportunities to observe global classroom techniques
- Familiarity with diverse teaching resources

2. For Continuous Professional Development

Teachers can access **online courses, webinars, and communities of practice** for upgrading their skills anytime, anywhere.

3. For Reducing Professional Isolation

Teachers, especially in remote areas, can connect with peers, experts, and institutions through ICT networks — sharing ideas, experiences, and solutions.

(269) Summary

ICT and multimedia have reshaped how learning happens.
They encourage active participation, creativity, and global awareness, turning the classroom into a **connected digital ecosystem**.

When used wisely, ICT empowers both teachers and learners to explore knowledge independently and collaboratively.

“ICT doesn’t replace the teacher—it expands the teacher’s reach.”

(270) CRITERIA FOR SELECTING AND INTEGRATING RESOURCES IN TEACHING–LEARNING

Core Thought

“A resource is only as powerful as the thought that chooses and uses it.”

Teaching-learning resources can transform the classroom—but only if chosen and used wisely.
Selection is about **what** we use.
Integration is about **how** and **why** we use it.
Both determine how deeply learners understand, apply, and connect what they learn.

(271) Meaning and Importance

Selecting and integrating teaching-learning resources is a **critical pedagogical skill**.
A good teacher doesn’t just gather materials; they **align resources** with curriculum goals, learner needs, and classroom context.

Every learner is different—so a single resource cannot fit all.
Teachers must ensure that selected materials are:

- Appropriate for learners’ age, background, and ability.
- Relevant to the content and objectives.
- Supportive of different learning styles and domains (cognitive, affective, psychomotor).

The **goal** is to use resources that *inspire curiosity, deepen understanding, and connect learning to life.*

(272) Criteria for Selecting Teaching-Learning Resources

Below are the major principles that guide selection:

1. Relevance to Curriculum and Objectives

Resources must directly address the **core ideas and essential questions** of the content.
They should present the **correct, updated, and accurate** concept.
Example: A geography teacher selecting a digital map aligned with NCERT content rather than random internet visuals.

2. Promotion of Higher-Order Thinking

Materials should develop **creativity, critical thinking, and reflection** rather than rote memorization.
They must challenge learners to question, analyze, and create.
Example: Using a case study in economics instead of only reading textbook theory.

3. Connection to Learners’ Needs and Background

Resources should link with learners’ **prior knowledge, interests, and experiences.**
They should also reflect inclusivity and diversity.
Example: In a multilingual class, providing bilingual charts or examples that include local contexts.

4. Inclusivity and Differentiation

Resources should accommodate different abilities, learning speeds, and styles.
They must support inclusive education, catering to all learners—gifted, slow, or differently-abled.
Example: Using audio lessons for visually impaired learners.

5. Connection with Real Life and Community

Materials should reflect **real-world experiences**, family, and social involvement.
Example: Inviting a local artisan for a live demonstration during a craft lesson.

6. User-Friendliness

Resources must be **easy to use, handle, and organize** by teachers and learners.
Complicated materials that consume time or confuse learners reduce effectiveness.

7. Interdisciplinary Relevance

Good resources allow learners to see **connections across subjects.**
This encourages application beyond textbooks.
Example: Using a film on climate change for both science and social studies lessons.

8. Coverage of All Learning Domains

Effective resources support the development of **cognitive (thinking)**, **affective (feeling)**, and **psychomotor (doing)** skills.
Example: A role-play activity that integrates knowledge, emotion, and performance.

9. Flexibility

Resources should allow teachers to **adapt, modify, or extend** them as per classroom needs.
A rigid or overly specific resource limits creativity.

10. Consideration of Learners' Background

A teacher must keep in mind learners' **socio-economic conditions, language, and environment** while selecting resources.
Overly advanced or culturally distant materials may alienate learners.

11. Use of Multimedia

Modern classrooms benefit from multimedia—**videos, computers, internet tools, and games**—to make learning interactive and enjoyable.

12. Motivation and Values

Resources should **motivate learners**, help them explore their own values, and promote responsible citizenship.
Example: A documentary on environmental conservation inspiring behavioral change.

13. Age Appropriateness

The content, language, and visuals of the resource must match learners' **age, maturity, and comprehension level.**

14. Development of Critical Thinking

Resources should encourage learners to **find, use, and evaluate information**, building decision-making and problem-solving capacity.

15. Balanced Assessment

Resources must include opportunities for both **traditional (written)** and **performance-based** assessment.
Example: Quizzes combined with project evaluation rubrics.

16. Physical Quality

Only materials in **good physical condition**—clean, visible, durable—should be used in the classroom.

17. Linguistic Accuracy

Language should be grammatically correct, clear, and free from ambiguity.

18. Ethical and Cultural Sensitivity

Resources should be **non-offensive** and avoid controversial, harmful, or inappropriate content related to religion, race, gender, drugs, or violence.

(273) Integration of Resources

Selection alone isn't enough — the **integration** of resources gives them meaning.
Integration means combining different materials **logically and purposefully** to support the learning process.

(274) Principles for Integrating Resources

1. **Plan Before You Teach**
    - Incorporate resources in the **lesson plan**.
    - Identify where, when, and how each resource fits in the learning sequence.
2. **Teacher Expertise**
    - Teachers should master the use of the selected resource (e.g., smartboard, lab equipment).
    - Practice beforehand to avoid technical interruptions.
3. **Remove Ambiguity**
    - Ensure that the materials are clear, focused, and free from unnecessary or confusing information.
4. **Online Resource Management**
    - Use **filtered, verified, and safe** digital platforms.
    - Block inappropriate sites and track learner usage when possible.
5. **Maintain Learner Engagement**
    - Avoid monotony by varying resources — visual, auditory, and interactive aids.
6. **Edit and Document**
    - Teachers may edit or adapt digital or print materials to suit the learning goal.
7. **Teacher as the Ultimate Resource**
    - The teacher's **knowledge, enthusiasm, and adaptability** remain the most powerful teaching resource.

Even when resources are limited, a creative teacher can turn any environment into a learning opportunity.

(275) Summary

Selecting and integrating teaching-learning resources is not about using the most advanced tools—
It's about using the **right** tools for the **right** learners at the **right** time.

When chosen with sensitivity and integrated thoughtfully, these resources:

- Make learning meaningful,
- Encourage creativity, and
- Connect knowledge with life.

"The best resource in any classroom is not the technology, but the teacher who knows how to use it wisely."

Managing classroom teaching-learning

(276) MANAGEMENT AND INSTRUCTION

Core Thought

"A well-managed classroom is not one that is silent — it's one that hums with purposeful learning."

A teacher is more than an instructor; they are also a **manager** of learning.
Management gives direction and rhythm to instruction — turning teaching into a structured, meaningful experience.

(277) Relationship Between Management and Instruction

Management and instruction are deeply connected.
Good classroom managers are usually effective instructors because they create the **conditions** under which learning flourishes.

Instruction involves the *what* and *how* of teaching,
while management shapes the *where* and *why* — the learning climate.

Both together ensure that learning is not only **delivered**, but **absorbed, practiced, and internalized**.

(278) Concept of Classroom Management

Classroom management refers to all the provisions, procedures, and strategies required to create and sustain an environment where **learning can take place effectively**.

It is not limited to maintaining discipline — it is the **art of guiding learner behavior and energy toward learning goals**.

According to Hofmeister and Lubke (1990):

"The primary goal of classroom management is not the reduction of misbehaviour, but the promotion of learner learning."

(279) Teacher as Manager

A teacher, in the role of a **manager**, performs several essential functions:

1. **Organizes** classroom resources (time, materials, space).
2. **Guides** learners' participation and attention.
3. **Creates** an atmosphere conducive to curiosity, questioning, and growth.

4. **Monitors and adjusts** instruction based on learner feedback.

Effective management ensures that learners feel **secure, valued, and motivated**.

(280) Key Elements of Classroom Management

Classroom management encompasses multiple overlapping skills and responsibilities:

1. **Creating a Teaching-Learning Environment**
   – Physical comfort, psychological safety, and intellectual stimulation.
2. **Maintaining Learner Involvement**
   – Ensuring active participation, engagement, and collaboration.
3. **Establishing Discipline**
   – Developing norms for respectful behavior and self-control.
4. **Ensuring Learning Outcomes**
   – Guiding activities and assessments toward pre-decided objectives.

(281) Management vs. Discipline

The two are related but distinct:

Aspect	Management	Discipline
Focus	Creating conditions for learning	Responding to misbehaviour
Nature	Preventive and proactive	Corrective and reactive
Goal	Facilitate learning and engagement	Maintain order
Scope	Broader – includes organization, motivation, and interaction	Narrower – concerns rule enforcement

In short: Discipline is a **part** of management, not its whole.
A well-managed classroom automatically minimizes the need for strict discipline.

(282) Characteristics of Effective Classroom Management

1. **Learner-Centered:**
   Focuses on learners' psychological and academic needs.
2. **Goal-Oriented:**
   Aims to achieve learning objectives efficiently.
3. **Dynamic and Flexible:**
   Adjusts strategies to suit the class mood, topic, and learners' pace.
4. **Positive Climate:**
   Encourages cooperation and respect rather than fear or authority.
5. **Productive Use of Time:**
   Minimizes idle moments; maximizes active learning time.
6. **Consistency:**
   Rules and expectations are applied fairly and transparently.
7. **Effective Communication:**
   Encourages open dialogue, questioning, and feedback.

(283) Teacher's Role in Effective Management

The teacher's personal traits and professional habits deeply influence classroom climate.
Research by **McNell and Wiles (1990)** found that:

- Verbal fluency,
- Intellectual competence,
- Enthusiasm,
- Sense of humour, and
- Reflective style
  are key factors in successful instruction and management.

In essence, the teacher's *personality* becomes the classroom's *tone*.

(284) The Learning Environment

A managed classroom is one where learners' **basic psychological needs** — belonging, autonomy, and competence — are met.
Such an environment fosters:

- Motivation
- Mutual respect
- Emotional security
- A sense of shared purpose

Example: A class that feels safe asking questions and making mistakes will learn more than one that fears being corrected.

(285) Research Insights

- Studies show that effective classroom management directly correlates with **academic achievement**.
- Teachers who maintain organized, engaging classrooms face **fewer behavior problems**.
- Classroom management is not static — it evolves with the teacher's relationship with learners.

(286) Summary

Classroom management is the **art of creating harmony between structure and freedom.**
It's about guiding learners toward discipline through purpose, not fear.

Effective management means:

- Clear expectations
- Active engagement
- Respectful relationships
- Meaningful learning

"A teacher doesn't control a class — they cultivate it."

When instruction and management work hand in hand, the classroom becomes not just a space for teaching, but a *community for learning.*

(287) PRINCIPLES OF CLASSROOM MANAGEMENT

Core Thought

"A teacher manages not by control, but by clarity, care, and consistency."

Effective classroom management isn't about keeping order — it's about creating an environment where learning naturally happens.
The principles that guide this management grow from **the teacher's understanding of content, concern for learners, and consistency of behavior.**

According to **Christian (1991)**, successful management begins with the teacher's attitude and skill, and is reflected in how learners respond.

(288) Major Principles of Classroom Management

1. Principle of Clarity and Mastery over Content

A teacher must have **complete command over the subject** they teach.
This means more than factual knowledge — it includes conceptual understanding, logical organization, and the ability to simplify complex ideas.

Why it matters:

- Learners trust and respect knowledgeable teachers.
- Confidence in content allows smooth explanations, meaningful discussions, and effective questioning.
- It helps organize lessons according to learners' mental readiness.

Example: A science teacher who clearly explains photosynthesis by linking it to daily examples (like cooking or breathing) manages both interest and understanding effectively.

2. Principle of Involvement

Learning is most powerful when **learners actively participate.**
The teacher should create opportunities for discussion, questioning, peer feedback, and problem-solving.

Why it matters:

- Engaged learners rarely cause disruptions.
- Active participation transforms a one-way lecture into a two-way learning experience.
- Learners gain confidence and ownership of knowledge.

Example: In a history class, learners can reenact a debate between national leaders instead of only reading about them.

3. Principle of Democratic Behaviour

A democratic classroom respects every voice.
The teacher ensures **equal opportunity** for all learners to share ideas, ask questions, and participate in decisions.

Why it matters:

- It builds mutual respect and cooperation.

- Learners feel valued and develop problem-solving and negotiation skills.
- Reduces tension and authoritarian pressure, promoting emotional security.

Example: Allowing the class to decide group rules or methods for project presentation.

4. Principle of Teacher's Behaviour

The teacher's **conduct, tone, and attitude** set the emotional rhythm of the class.
Learners constantly observe their teacher — how they speak, react, and treat others.

Why it matters:

- Positive teacher behavior (confidence, fairness, patience) promotes similar behavior in learners.
- A calm and consistent teacher reduces anxiety and encourages discipline.

Example: A teacher handling a noisy classroom with quiet firmness instead of anger models self-control and gains respect.

5. Principle of Self-Control

Teachers must exercise **emotional stability and firmness**.
This means staying consistent in actions, calm in crisis, and fair in discipline.

Why it matters:

- Learners imitate the teacher's self-control.
- Prevents escalation of conflicts.
- Builds trust and a sense of safety.

Example: When a student misbehaves, the teacher addresses it privately and calmly instead of publicly scolding.

6. Principle of Flexibility

Flexibility does not mean leniency — it means **adapting wisely to circumstances.**
A teacher should adjust plans or behavior according to learners' needs, moods, and classroom situations.

Why it matters:

- Every class and day are different; rigidity limits learning.
- Flexibility helps respond to learners' ideas and foster creativity.

Example: A teacher changing a lecture plan into a group discussion because the topic sparked strong interest among students.

7. Principle of Personal Attributes

The teacher's **warmth, empathy, and sensitivity** deeply influence classroom climate.
Learners respond positively when they feel understood and respected.

Why it matters:

- Builds emotional connection and motivation.
- Reduces fear of failure and encourages honest communication.

- Creates a supportive learning environment.

Example: A teacher noticing a quiet learner's hesitation and gently encouraging them to share in small groups.

(289) Summary of the Principles

Principle	Core Idea	Impact on Learners
Clarity and Mastery	Deep knowledge and clear explanation	Builds trust and understanding
Involvement	Active participation in learning	Enhances engagement and responsibility
Democratic Behaviour	Equal opportunity and participation	Develops confidence and cooperation
Teacher's Behaviour	Positive attitude and example	Encourages respect and discipline
Self-Control	Emotional stability and fairness	Promotes calm and order
Flexibility	Adaptation to changing situations	Fosters creativity and relevance
Personal Attributes	Warmth and empathy	Builds motivation and positive climate

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(290) Essence of Classroom Management

An effective teacher combines **structure** and **sensitivity**.
They lead with authority that comes not from power, but from trust.

When learners see their teacher as **competent, caring, and fair**, they not only follow but grow.
Management becomes invisible — because learning itself becomes the classroom's organizing force.

"The best-managed classroom is not controlled by the teacher's rules, but by the learners' desire to learn."

(291) MANAGING A CLASSROOM

Core Thought

"A well-managed class doesn't happen by chance — it's built lesson by lesson, moment by moment."

Classroom management is not about control; it's about **creating conditions where learning thrives**.
Research consistently shows that nearly all learners — about **95%** — can master the expected skills if the teacher provides the right support, structure, and engagement.

(292) Meaning

Managing a classroom means **organizing people, time, space, and activities** so that teaching and learning can take place smoothly.
It involves:

- Designing lessons that keep learners actively engaged,
- Establishing clear rules and expectations,
- Monitoring and guiding behavior, and
- Maintaining a supportive environment for growth.

A teacher's management skill is, therefore, a blend of **planning, leadership, empathy, and adaptability.**

(293) Factors Influencing Classroom Management

Educational researchers (Doyle, 1986; Crocker & Brooker, 1986; Christian, 1991) have identified several factors that shape effective classroom management.

1. Effective Instructions

"Good teaching is the best discipline." — Doyle (1986)

When teaching is engaging, learners stay focused, and discipline problems decline.
Well-planned instruction includes:

- **Clear objectives**
- **Smooth pacing**
- **Guided practice**
- **Immediate and constructive feedback**
- **Attention to individual differences**

Why it matters:
When learners are absorbed in meaningful learning tasks, their energy flows into productivity rather than distraction.

Example: During a science experiment, students working in teams with clear steps and goals are less likely to misbehave than those sitting idle during a lecture.

2. Setting and Implementing Rules

Rules act as a **framework of respect and structure.**
According to Crocker and Brooker (1986), teaching should be handled in a **business-like manner** — purposeful, time-efficient, and orderly.

Key points for setting rules:

- Introduce rules the way you introduce a concept — with **clarity and reason**.
- Involve learners in discussing **why** the rules exist.
- Clearly explain **what will happen** if rules are broken.
- Apply rules **consistently but fairly**.

Example Rules:

- Raise your hand before speaking.
- Be prepared with materials.
- Respect others' right to learn and speak.

Example: A teacher explains, "We raise our hands before speaking because it helps everyone hear each other." Learners see logic, not just authority.

3. Managing Intervention

Monitoring and intervening are essential for maintaining a positive climate.
The teacher must **notice early signs** of distraction or misbehavior and act calmly but firmly.

Guidelines for intervention:

- Move around the classroom — proximity itself can deter disruption.
- Address issues quietly and privately when possible.
- Avoid interrupting the flow of instruction unless absolutely necessary.
- Use positive reinforcement before punishment.

Example: A teacher walks to the back of the room while speaking, maintaining visibility and connection with every learner.

Too many interventions can disrupt learning; selective attention and calm correction work better than constant policing.

4. Feedback on Appropriate Behaviour

Learners look for cues — *"Am I doing it right?"*
Feedback helps shape and reinforce desirable behavior.

Effective feedback includes:

- **Immediate praise** for good work or conduct.
- **Constructive correction** for improvement.
- **Consistency** — avoid mixed messages.

Key Principle:
Praise must be **earned and specific** — tied to behavior or achievement, not flattery.

Example: Instead of "Good job," say, "I appreciate how you waited your turn to speak — that helped everyone listen."

5. Class Environment

The physical and psychological environment affects attention, motivation, and emotional comfort.

Components of a positive class environment:

- **Organization:** Seating, resources, and visibility should aid interaction.
- **Communication:** Respectful and open tone between teacher and learners.
- **Feedback:** Encouraging and constructive.
- **Interpersonal Relations:** A sense of trust and belonging.
- **Calmness:** Avoid chaos and noise that drain energy.

A well-managed class feels **safe, structured, and stimulating** — a space where learners want to be.

Example: A teacher uses calm music during group work and ensures the classroom layout allows easy movement and eye contact.

(294) Essence of Classroom Management

Classroom management is both **a science and an art** —
Science, because it follows clear strategies and structures;
Art, because it relies on the teacher's intuition, tone, and presence.

Effective management means:

- Order without fear
- Discipline without rigidity
- Freedom with responsibility

“Management is not about controlling students — it’s about designing experiences that make control unnecessary.”

(295) TECHNIQUES OF CLASSROOM MANAGEMENT

Core Thought

“A teacher doesn’t just teach lessons — they manage learning.”

Classroom management techniques are not rigid formulas; they are **adaptive strategies** shaped by the teacher’s understanding of learners, learning goals, and classroom dynamics.
An effective teacher balances structure with sensitivity — ensuring discipline **without killing curiosity** and order **without suppressing energy.**

(296) Meaning

Managing a classroom is about creating conditions where learners can develop **knowledge, skills, and self-control** with minimum stress.
It involves planning, organizing, motivating, and guiding the group — like a manager who leads a team toward shared success.

Every class has unique challenges, especially at the **secondary level**, where learners are developing independence, identity, and responsibility.
Hence, management techniques must be chosen and applied with flexibility and insight.

(297) Major Techniques of Classroom Management

1. Behaviour Modification Technique

Concept:
Based on *B.F. Skinner’s* principles of **reinforcement**, this technique assumes that learner behavior is a response to environmental stimuli — especially teacher behavior.

Key Idea:

- Identify desirable and undesirable behaviors.
- Reinforce positive behaviors (with praise, reward, or privilege).
- Ignore or gently correct undesirable ones.
- Use **positive reinforcement** to strengthen learning habits.

Examples:

- Rewarding punctuality with extra activity time.
- Allowing students to watch an educational video (a popular activity) after completing math practice (a less popular one).

Advantages:

- Builds motivation through reward.

- Encourages self-discipline.
- Creates a positive classroom tone.

Limitation:

- Overuse of rewards can reduce intrinsic motivation.
- Must be applied fairly and consistently.

2. Learner Responsibility Technique

Concept:
Learners are guided to take **ownership of their behavior and learning.**
The teacher's role is to make expectations clear and help learners understand the consequences of their choices.

Key Features:

- Encourages **self-discipline** and reflection.
- Involves learners in setting behavioral goals.
- Builds trust and mutual respect between teacher and learners.

Example:
A teacher discusses a disruption calmly, helping the student design their own plan to improve participation.

Advantages:

- Develops accountability and maturity.
- Strengthens teacher–student relationships.
- Reduces need for punishment.

Limitation:

- Requires patience and good communication skills from the teacher.

3. Group Activities Technique

Concept:
Learning through **collaboration** can be a strong management strategy.
When learners work in teams, **peer influence and cooperation** help regulate behavior.

Key Features:

- Group rewards motivate participation.
- Builds teamwork and leadership.
- Encourages social learning and empathy.

Examples:

- Group discussions, debates, and cooperative projects.
- Inter-group competitions or problem-solving tasks.

Advantages:

- Reduces individual resistance or misbehavior.
- Increases engagement and shared responsibility.
- Makes learning enjoyable.

Limitation:

- Requires careful monitoring to avoid dominance by certain members.

4. Skill in Maintaining Learners' Attention

Concept:
Attention is the lifeblood of learning. The teacher's task is to **capture and sustain it.**

Practical Techniques:

- Use variation in **voice tone, speed, and movement.**
- Change activities or formats before monotony sets in.
- Include **humor, storytelling, and real-life examples.**
- Use **eye contact and proximity** to maintain focus.
- Arrange seating so every learner is visible and included.

Example:
While teaching history, a teacher uses a short video clip of a medieval battle and pauses to discuss emotional details — connecting facts to feelings.

Advantages:

- Keeps energy high.
- Reduces discipline problems.
- Promotes curiosity and creativity.

Limitation:

- Requires preparation and flexibility to adjust pacing.

(298) Use of Innovative and Audio-Visual Methods

Innovative techniques — such as role play, simulations, project-based learning, and use of **ICT/multimedia tools** — help teachers maintain engagement.

Example:
A film clip about the Mughal era or patriotic songs from that period makes historical learning more vivid and emotionally engaging.

Benefits:

- Converts passive learning into active experience.
- Supports diverse learning styles (visual, auditory, kinesthetic).
- Makes information memorable and meaningful.

(299) Strengths of These Techniques

1. Create an atmosphere of **mutual respect** and engagement.
2. Replace punishment with **positive reinforcement** and dialogue.
3. Encourage learners to manage themselves.
4. Promote **collaborative learning** and peer support.
5. Make teaching dynamic and learner-centered.

(300) Limitations

- Require planning, patience, and adaptability.
- Some methods (like reinforcement or group work) can lose effectiveness if overused or poorly structured.
- Teachers must balance authority and freedom carefully.

(301) Essence of Classroom Management Techniques

Effective classroom management is less about control and more about **connection.**
A teacher who plans thoughtfully, understands learners, and stays emotionally balanced can guide even a restless group toward learning.

"The best technique is not in the method — it's in the teacher's mindset."

A flexible, fair, and empathetic teacher turns management into mentorship.

Managing learning in an inclusive classroom

(302) MANAGING LEARNING IN AN INCLUSIVE CLASSROOM

Core Thought

"An inclusive classroom is not about placing all children under one roof — it's about making sure every child belongs there."

In today's education system, inclusivity is not just a moral ideal but a legal and pedagogical responsibility. Every learner — regardless of ability, background, or circumstance — deserves equal access to meaningful learning experiences.

(303) Concept of an Inclusive Classroom

An **inclusive classroom** is a learning space where **all learners — with or without disabilities, from all social, cultural, linguistic, and economic backgrounds — learn together** with the support of the teacher and peers.

It values diversity as a strength and ensures that **every learner's voice, experience, and identity** are respected.

In short:

"An inclusive classroom doesn't just accommodate differences — it celebrates them."

Key Features:

1. Learners with and without disabilities learn side by side.
2. Equal opportunities are provided to all learners.

3. Respect and empathy form the foundation of classroom culture.
4. Learning is personalized according to ability and need.

(304) Challenges in Managing Inclusive Classrooms

Teachers often face real-world difficulties such as:

- Limited training in special and inclusive education.
- Inadequate infrastructure and teaching aids.
- Shortage of assistive technology and resource personnel.
- Large class sizes and diverse learner needs.

While policies like the **Right to Education Act (2009)** promote inclusion, its classroom implementation requires both skill and sensitivity from teachers.

(305) Strategies for Managing an Inclusive Classroom

1. Know Your Learner

Understanding each learner's **abilities, needs, background, and learning style** is the first step toward inclusion.

How to do this:

- Spend initial classes observing and interacting.
- Maintain learner profiles with information on strengths, weaknesses, and interests.
- Communicate with parents and previous teachers to understand individual needs.

Example: Knowing that a student struggles with hearing allows you to seat them near the front and use visual cues while teaching.

2. Know the Resources

A successful inclusive classroom depends on how well you use available **resources** — both human and material.

Tips:

- Identify school facilities and community support systems.
- Use flexible teaching aids — e.g., visual charts, tactile models, audio explanations.
- Combine resources that can serve multiple learners (audio-visual materials, captioned videos, digital tools).

Example: Using recorded lessons benefits both visually impaired learners (via audio) and others who need revision support.

3. Universal Design for Learning (UDL)

UDL is an educational framework that ensures lessons are designed to be **accessible, flexible, and usable by everyone**.

Principles of UDL:

1. **Multiple means of representation** – Present content in various formats (text, visuals, audio, hands-on).
2. **Multiple means of engagement** – Offer choices in learning activities to sustain interest.
3. **Multiple means of expression** – Allow learners to show understanding through writing, speaking, art, or performance.

Example: Providing a text in print, digital format, and Braille ensures accessibility for all learners.

4. Collaborative and Cooperative Learning Strategies

Group learning promotes **peer support and social interaction**, allowing learners to help each other grow.

Benefits:

- Builds empathy and teamwork.
- Allows sharing of strengths — one learner's ability compensates another's limitation.
- Encourages communication across diverse backgrounds.

Example: In a mixed group, a visually impaired learner might narrate, while another writes — both contribute meaningfully.

5. Supportive Behaviour

The teacher's **attitude, language, and tone** are critical in an inclusive setup.

Do's:

- Use respectful language; avoid labels or stereotypes.
- Give positive reinforcement and encouragement.
- Promote peer acceptance and kindness.
- Be patient and non-judgmental with learners who need extra time or attention.

Example: Instead of saying "special child," say "learner who learns differently" — it shifts the focus from disability to individuality.

6. Classroom Sitting Arrangement

A thoughtful **seating plan** ensures visibility, comfort, and accessibility.

Suggestions:

- Place learners with hearing difficulties closer to the teacher for lip reading.
- Provide barrier-free access for wheelchair users.
- Use circular or U-shaped seating for better interaction and visibility.

Example: Keep enough aisle space for mobility aids and place important visuals within easy view for all learners.

7. Variety in Teaching Methods

Monotony excludes; variety includes.
Use **diverse teaching techniques** suited to different learning styles.

Methods to include:

- Storytelling, role-play, dramatization.
- Use of ICT, visual media, and tactile materials.
- Project-based and experiential learning.

Encourage learners to identify **local and low-cost materials** for activities.

Example: Use local maps or objects from daily life for concept-based learning instead of expensive aids.

(306) Summary

An inclusive classroom:

- Values **diversity** as an asset.
- Builds **empathy, collaboration, and respect.**
- Ensures that **no child is left out** of learning due to disability, language, or background.

The teacher's role:
Planner, facilitator, advocate, and learner — all at once.

"Inclusion is not about treating everyone the same; it's about giving everyone what they need to succeed."

(307) MANAGING BEHAVIOURAL PROBLEMS IN THE CLASSROOM

Core Thought

"A teacher doesn't just teach subjects — they shape behavior."

Every classroom has its share of behavioral challenges. Some stem from personal insecurities, others from peer influence, environment, or unmet emotional needs.
The goal isn't to punish or silence, but to **understand, prevent, and redirect behavior** toward growth and responsibility.

(308) Understanding Behavioural Problems

Learners may display undesirable behavior due to:

- **Personal factors** (stress, lack of confidence, emotional issues).
- **Group influence** (peer pressure, attention-seeking).
- **External situations** (family conflicts, social or economic distress).

A teacher's job, therefore, extends beyond instruction — they must become a **guide and stabilizer**, especially in schools where no formal counselor exists.

Behaviour management involves **three key strategies**:

1. **Preventive Measures**
2. **Supportive Measures**
3. **Corrective Measures**

Here we focus on the **preventive phase**, where the goal is to stop problems before they start.

(309) Preventive Measures

“It’s easier to build positive habits than to repair broken ones.”

Preventive measures promote *positive discipline*, ensuring the classroom atmosphere discourages misbehavior naturally.
These strategies apply to **all learners**, not just those who show problems.

1. Reinforcing and Rewarding Good Behaviour

“Punishment tells a child what not to do. Reinforcement shows them what they can become.”

Recognize and reward positive behavior instead of focusing only on mistakes.
Appreciation motivates repetition — it turns discipline into self-discipline.

Example:
A teacher places a *“Good Deeds Jar”* in the classroom. Each time a learner demonstrates helpfulness, honesty, or teamwork, they put their name in the jar.
At month’s end, the student with the most entries is appreciated publicly.

This builds **peer motivation** and a **culture of positivity** rather than fear.

Advantages:

- Promotes intrinsic motivation.
- Reduces need for punitive action.
- Builds self-esteem and collective responsibility.

2. Effective Classroom Rules

Rules are the **spine** of classroom management — they give structure to freedom.

Guidelines for setting rules:

- Involve learners in creating the rules.
- State them **clearly and simply.**
- Explain the **reasons and consequences**.
- Apply them consistently — fairness earns respect.

Example:
“Raise your hand before speaking,” becomes more acceptable when learners help draft it themselves.

Benefits:

- Learners develop ownership.
- Prevents misunderstandings and favoritism.
- Encourages self-regulation.

3. Non-Verbal Communication

“A teacher’s face often speaks before their words do.”

Body language — gestures, eye contact, tone, and movement — can prevent misbehavior more effectively than long lectures.

Tips:

- Maintain calm posture and confident tone.
- Use eye contact to convey presence.
- Smile or nod to acknowledge good effort.
- Avoid sarcasm, pointing, or aggressive gestures.

Example:
When a student is distracted, a simple walk toward their desk — no words — often redirects attention better than reprimanding.

4. Cooperative Learning Strategies

Encourage **team-based and peer-assisted activities**. When learners work *with* one another, they learn to manage differences and share responsibility.

Benefits:

- Reduces boredom and restlessness.
- Builds communication and empathy.
- Converts potential conflict into cooperation.

Example:
Assign mixed-ability groups for projects. Let each member contribute based on strength — one presents, another writes, a third illustrates.

5. Academic Support

Sometimes misbehavior is a *mask for struggle*.
A learner who cannot follow lessons may act out to hide embarrassment.

Teacher's Role:

- Identify students who lag behind.
- Offer short remedial sessions or peer tutoring.
- Provide achievable goals to rebuild confidence.

Example:
Allow slower learners to complete a few extra questions after class, praising their effort instead of comparing them with others.

6. Parental Involvement

Behaviour doesn't exist in isolation — it's influenced by the **home environment**.
Constant, respectful communication with parents is crucial.

Strategies:

- Conduct regular parent–teacher interactions.
- Encourage parents to share emotional or behavioral changes at home.
- Align disciplinary approaches between school and home.

Example:
If a child shows aggression in school, a talk with parents might reveal recent family stress.
Working together prevents blame and helps build consistency.

(310) Summary of Preventive Measures

Focus Area	Strategy	Outcome
Behavior	Reinforcement & Reward	Encourages positive conduct
Rules	Clear & Fair Guidelines	Promotes self-discipline
Communication	Non-Verbal Cues	Builds calm, responsive tone
Interaction	Cooperative Learning	Fosters teamwork & empathy
Learning	Academic Support	Prevents frustration & acting out
Home Link	Parental Involvement	Strengthens consistency

(presented narratively for clarity, not in table format)

(311) Key Takeaway

"Behaviour management isn't about control — it's about connection."

A preventive approach replaces fear with trust, punishment with purpose, and control with cooperation.
The most powerful classroom tool a teacher holds is **understanding** — when learners feel seen and valued, they rarely feel the need to act out.

(312) SUPPORTIVE AND CORRECTIVE MEASURES FOR MANAGING BEHAVIOURAL PROBLEMS

Core Thought

"A disciplined classroom isn't one without noise — it's one where every sound has a purpose."

After preventive strategies, a teacher often encounters situations where behavioral issues begin to surface despite best efforts.
Here, the goal shifts from prevention to **support and correction** — not punishment, but purposeful redirection.

(313) SUPPORTIVE MEASURES

Supportive measures come into play **when a behavioural problem has started appearing**, but is still within manageable limits.
Unlike preventive steps (which are proactive), supportive measures are **responsive** — helping the learner to regain balance and guiding behaviour toward positive outcomes.

They are grounded in the philosophy of **Positive Behaviour Support (PBS)**, which focuses on **encouragement, structure, and empathy** rather than criticism or exclusion.

1. Extinction and Redirection

Extinction:
When a learner displays attention-seeking but harmless behavior (like tapping a desk or making noises), the teacher avoids reacting — denying the "reward" of attention. Gradually, the behavior fades.

Redirection:
Instead of ignoring completely, sometimes it helps to **channel** the same energy productively.

Example:
A learner keeps making funny noises to disrupt class. The teacher calmly asks him to lead a short "funny

sound session" for 5 minutes — turning mischief into participation.
This breaks the pattern and removes its disruptive edge.

Purpose:

- Prevents escalation.
- Converts negative behavior into creative engagement.

2. Conflict Resolution Skills

Conflicts among peers often lead to anger, withdrawal, or disruption.
Teachers can introduce **conflict management techniques** as classroom habits.

Example:

- Teach learners to *listen first, speak next*.
- Encourage use of "I statements" ("I felt hurt when…" instead of "You always…").
- Conduct role-plays on how to resolve disagreements.

Long-term goal:
Learners develop emotional intelligence, tolerance, and empathy.

3. Curricular Adaptation

Sometimes, the **curriculum or teaching pace** itself triggers frustration.
If learners find tasks too hard, irrelevant, or monotonous, they react through defiance or apathy.

Supportive Strategy:

- Offer choice in activities (e.g., written summary *or* oral presentation).
- Adjust difficulty level — provide scaffolding.
- Encourage peer or parental help for tasks beyond comfort zones.
- Integrate topics linked to real-life interests.

Example:
A student uninterested in math finds purpose when word problems are reframed around cricket scores — something relatable.

Outcome:
Adaptation reduces stress and restores engagement, preventing behavioral fallout.

4. Replacement Skills

Learners often act out because they lack **alternative coping strategies.**
If their usual method fails, they don't know what else to try.

Teacher's Role:

- Guide learners in discovering **healthy alternatives** to negative responses.
- Reinforce small successes to strengthen confidence.

Example:
If a student shouts to get attention, the teacher trains them to raise a hand or ask politely instead — and praises them for using this replacement behavior.

Outcome:
Replaces reaction with reflection.

(314) CORRECTIVE MEASURES

Corrective measures are **the final step** — used only when preventive and supportive methods fail and misbehavior becomes frequent or harmful.
They aim not to punish, but to **restore order and accountability** through clear consequences and structured change.

Corrective steps often require **coordination with parents, school authorities, or counselors.**

1. Making Learners Aware of Consequences

Calmly discuss the outcome of continued misbehavior.
This helps learners see that actions lead to results — good or bad.

Example:
A teacher privately tells a disruptive learner, "If you continue interrupting, we'll need to call your parents to discuss it. I'd prefer we solve it together first."

Key Points:

- Maintain respect; avoid public humiliation.
- Involve parents early.
- Focus on choice and responsibility, not guilt.

Effect:
Encourages self-reflection and accountability.

2. Removal from a Situation

If behavior persists or escalates, the teacher may need to **temporarily remove the learner** from the triggering environment — not as punishment, but as redirection.

Methods:

- Change seat location or peer group.
- Assign constructive duties (class monitor, helping in school activities).
- Engage the learner in co-curricular tasks like art, sports, or volunteering.

Example:
A restless student who disrupts class may be assigned to assist in organizing materials or leading a small activity — shifting focus from resistance to responsibility.

Purpose:

- Breaks negative routine.
- Reduces peer attention that reinforces misbehavior.

- Provides fresh opportunity to demonstrate good conduct.

(315) Summary

Phase	Goal	Key Approach	Example Outcome
Preventive	Avoid emergence of misbehavior	Clear rules, rewards, cooperation	Calm, predictable environment
Supportive	Redirect ongoing behavior	Extinction, UDL, conflict resolution	Learners regain control
Corrective	Address persistent issues	Awareness, removal, parental involvement	Restored discipline & growth

(Presented narratively for readability)

(316) Essence

"When behaviour falters, it's not defiance—it's communication."

Effective teachers listen beneath the disruption, find the message in the noise, and guide learners back to purpose.
Managing behavior is less about *reaction* and more about *response* — calm, fair, and consistent.

The real victory is not a quiet class, but a **self-disciplined one**.

(317) TIME MANAGEMENT IN TEACHING-LEARNING

Core Thought

"Time can be a teacher's best ally—or the quietest thief."

Every teacher is given the same number of minutes in a day, yet the outcomes differ widely. The difference lies not in the clock, but in how it's used.
Time management is the art of turning limited hours into meaningful learning.

(318) Meaning and Importance of Time Management

In education, **time is a learning resource.**
Just as materials and methods matter, the teacher's ability to manage time directly influences learning outcomes.

A teacher must complete curriculum objectives **within fixed periods**, while ensuring that no subject or learner is neglected.

Key ideas:

- Learners' achievement increases when classroom time is used mainly for **instructional purposes**.
- The **quality of time use** (how it's spent) matters more than the quantity (how much is allotted).
- Proper time management builds consistency, order, and engagement in learning.

"Every lost minute in class is a lost opportunity to learn."

(319) Use of Classroom Time

Researchers such as **Hofmeister & Lubke (1990)** and **Good & Brophy (1987)** identified six categories of classroom time:

1. **Available Time**
2. **Allotted Time**

3. **Engaged Time**
4. **Academic Learning Time (ALT)**
5. **Pacing (of curriculum and lesson)**
6. **Transition Time**

Let's unpack these one by one.

1. Available Time

This refers to the **total time available in school**—the number of instructional days per year and total hours per day (usually six).

Teachers must plan this time carefully to balance academic, co-curricular, and developmental goals.

Example: If a school year has 200 working days, teachers should outline how many of those are used for assessments, activities, and subject teaching.

Goal:
Optimize this time to promote **holistic learner development**, not just syllabus completion.

2. Allotted Time

The **specific portion of available time** assigned to a particular subject or topic.
For instance, English might get 5 periods a week, Mathematics 6, etc.

However, merely allotting time doesn't guarantee effective use.
Teachers differ widely—some spend 40 out of 45 minutes in productive learning, others lose half the time to non-instructional chatter.

Example:
A teacher who plans in advance—materials ready, objectives clear—can use the full period effectively.

Tip:
Plan each class so that the *instructional time outweighs managerial time* (like attendance or settling the class).

3. Engaged Time

This is the **actual time learners spend actively learning** — reading, writing, discussing, or solving problems.

It excludes distractions like daydreaming, off-topic conversation, or waiting for the teacher.

Quality over Quantity:
Ten minutes of active engagement can teach more than thirty minutes of passive listening.

Example:
Instead of reading a passage aloud while others pretend to listen, ask every learner to find difficult words and use a dictionary — more involvement, deeper learning.

4. Academic Learning Time (ALT)

ALT = time learners spend on **meaningful academic tasks with success**.

It combines both quantity and quality:

- Time spent doing relevant work.
- Accuracy and comprehension during that work.

ALT is the best predictor of academic achievement.
High ALT means learners are not only active but also learning effectively.

Example:
When students solve math problems independently (and correctly), that's ALT.
When they copy from the board without understanding — that's not.

To Increase ALT:

- Reduce time wasted on non-academic tasks.
- Align all classroom activities directly with learning objectives.
- Provide quick feedback to maintain success and motivation.

5. Pacing (of Curriculum and Lessons)

Pacing means how fast or slow the teacher moves through the syllabus and individual lessons.

- **Curriculum pacing:** How much of the overall syllabus is covered each term or year.
- **Lesson pacing:** The tempo of teaching within a single class period.

Why pacing matters:

- A fast, energetic pace keeps attention alive.
- Too slow a pace breeds boredom.
- Too fast leads to confusion.

Example:
A teacher who spreads syllabus evenly, with regular revision and practice, maintains momentum and reduces last-minute rush.

Good pacing:
Balances **coverage** with **comprehension.**

6. Transition Time

Transition is the **time spent shifting from one activity to another**—for example, moving from lecture to group work, or from discussion to note-taking.

If transitions are not managed, valuable minutes vanish, and learners lose focus.

To manage transition smoothly:

- Keep materials ready before class begins.
- Clearly announce when one activity ends and another starts.
- Maintain class attention during changeovers.
- Motivate learners about what comes next.

Example:
Saying, "Now that we've discussed the poem's meaning, let's quickly form pairs to explore its rhythm," signals transition clearly and keeps energy steady.

Effect:
Well-managed transitions maintain *instructional momentum* and reduce misbehavior.

(320) Relation Between Time and Learning

The link is simple:

"More well-used time = More meaningful learning."

But effective time use depends on:

- Teacher's **planning and organization**.
- Learners' **interest and engagement**.
- Availability of **resources** and minimal disruptions.

A classroom rich in **Academic Learning Time** faces fewer discipline issues, higher motivation, and improved achievement.

(321) Key Insights for Teachers

- Start and end classes on time.
- Use the first and last few minutes wisely — these are the most memorable.
- Prepare teaching materials in advance to avoid interruptions.
- Balance lecture with activities that involve learners.
- Maintain clear pacing — neither rushed nor idle.
- Treat transition time as part of teaching, not as downtime.

"Time, once lost in the classroom, cannot be made up by homework."

(322) Summary

Aspect	Meaning	Goal for Teacher
Available Time	Total instructional hours in the school year	Plan for holistic learning
Allotted Time	Time set aside per subject/topic	Use effectively through planning
Engaged Time	Active student participation	Maximize attention and activity
Academic Learning Time (ALT)	Time on successful, relevant academic tasks	Optimize for achievement
Pacing	Speed of curriculum and lesson flow	Balance coverage and comprehension
Transition Time	Shift between activities	Keep quick and smooth

(Presented narratively for clarity)

(323) Essence

"An effective teacher doesn't find time — they create it."

Time management in teaching is less about control and more about rhythm — a rhythm where every minute has purpose, and every learner finds pace in learning.

(324) Practical suggestions for effective time management

Core Thought

"Time can't be controlled, but it can be prepared for."

Effective teaching isn't about racing through the syllabus—it's about **using every minute with intent**.
A teacher who anticipates, prepares, and adapts can transform ordinary hours into deep learning experiences.

The following practical suggestions (based on *Lubke, 1990*) can help teachers sharpen their **classroom time management skills**.

(325) i) Increasing Allotted Time

Allotted time is the time formally given to instruction. To make the most of it:

1. Be prepared in advance.
Keep all materials—books, chalk, markers, charts, AV tools—ready before class.
Have backup activities for early finishers so no one sits idle.

Examples:

- Extra practice worksheets or creative tasks for fast learners.
- Keep projector, videos, and audio systems pre-tested and ready to avoid setup delays.

2. Manage homework efficiently.

- Check and collect homework quickly at the start of the period.
- Note incomplete work, but first ask *why* it's unfinished—lack of understanding or time?
- Offer a chance to redo the task after resolving the problem.

Outcome:
Every minute saved from routine tasks goes back into real teaching time.

(326) ii) Increasing Engaged Time

Engaged time means time when learners are **actively learning**—thinking, writing, discussing, or solving problems.

1. Set a clear class schedule.
Display the timetable prominently. Predictability helps learners prepare mentally.

2. Begin strong.

- Greet the class warmly.
- Ask one or two thought-provoking questions to draw attention before diving into content.

3. Use effective communication.

- Maintain **eye contact**.
- Mix verbal and non-verbal cues (gestures, tone, proximity).
- Move around the class—this keeps everyone alert.

4. Reinforce and redirect.
Praise desirable behaviour publicly; correct undesirable quietly.
Remind them occasionally of classroom norms.

5. Keep attention alive.

- Use short, interactive moments—brainstorming, quick polls, or think-pair-share.
- Motivate with small rewards: "Finish this in ten minutes, then we'll play a quick quiz."

6. Manage waiting time.
If some learners are stuck and you're helping others, tell them to attempt the next question—so learning never stalls.

(327) iii) Increasing Academic Learning Time (ALT)

Academic Learning Time = time spent **on meaningful academic tasks with understanding and success**.

1. Connect lessons with real life.
Learning sticks when it feels relevant.
Example: While teaching media studies, ask, "How have TV or social media changed how your family communicates?"

2. Use constant attention checks.
Ask quick "Wh-Questions" — *What, Why, When, Who, How* — to confirm engagement.
These open-ended questions make learners think and respond actively.

3. Build lessons around interests.
Link topics to learners' hobbies or local examples.
If learners love sports, frame math problems around scores or statistics.

4. Plan lessons in small steps.

- Structure learning progressively.
- Allow repeated practice until mastery is achieved.
- Use familiar vocabulary and examples for easier comprehension.

5. Provide clear, concrete procedures.
Avoid vague instructions. Demonstrate step-by-step.

Effect:
High ALT reduces confusion, increases success, and minimizes discipline problems.

(328) iv) Pacing Curriculum and Lessons

Pacing means managing how quickly or slowly the syllabus and lessons progress.

1. Prepare yearly and term-wise schedules.
Set milestones for what should be completed by mid-term, exam period, etc.

2. Match pace with learners' ability.
Avoid overloading. Include only as much content as your learners can realistically grasp and retain.

3. Keep the rhythm of teaching.
Respond quickly to answers—praise, correct, and move on. This keeps momentum alive.

4. Don’t slow down unnecessarily.
If learners struggle, simplify the concept—not the pace. Break down complexity instead of stretching time.

Result:
Balanced pacing ensures coverage, comprehension, and curiosity—all at once.

(329) v) Decreasing Transition Time

Transitions—switching between tasks—often drain time and attention if unmanaged.

1. Prepare learners beforehand.
Tell them what’s coming next: “After this discussion, we’ll do a short quiz.”
Predictability reduces chaos.

2. Clarify expectations.
Students should know what to do next without waiting for repeated instructions.

3. Plan for early finishers.
Give extra but meaningful tasks (like peer checking or helping others). This prevents idle time.

4. Establish movement rules.
Lay down clear norms for:

- Leaving or entering class.
- Getting materials.
- Group transitions.

5. Keep transitions short and focused.
Avoid unnecessary talk or repeated explanations.

6. Manage two types of transitions:

- **Learner transitions:** (e.g., sharpening pencils, water breaks).
- **Teaching transitions:** (e.g., switching slides, distributing materials).

7. Stay fair and alert.
Don’t spend excessive time with one learner. Major issues can be handled later through remedial support.

8. Indicate consequences.
Calmly state what happens if transitions become disruptive — helps maintain order.

(330) Summary of Time Management Practices

Focus Area	Strategies for Teachers	Expected Outcome
Increasing Allotted Time	Prepare early, manage homework smartly	More time for instruction
Increasing Engaged Time	Keep learners alert and involved	Better concentration and discipline
Increasing ALT	Link lessons to real life, ensure mastery	Deeper understanding
Pacing	Plan curriculum flow, adjust to learner ability	Balanced coverage & interest
Transition Time	Prepare learners, control movement	Smooth class flow, fewer disruptions

(Presented narratively for simplicity)

(331) Essence

"You can't add more hours to a school day, but you can add more learning to each hour."

Time management isn't about rushing—it's about rhythm.
A teacher who plans with purpose, transitions with clarity, and teaches with pace turns every class period into meaningful learning time.

332. Concepts of Testing, Measurement, Assessment, and Evaluation

332.1 Testing – Meaning and Concept

Definition:
A **test** is a systematic procedure consisting of a set of questions or tasks designed to measure a specific characteristic, ability, or knowledge of an individual or group.
In education, testing is used as a **tool for evaluation** of students' achievement or learning outcomes.

According to Experts:

- **Anastasi and Urbina (nineteen ninety-seven):** Testing is an objective and standardized measure of a sample of behavior.
- **AERA, APA, & NCME (nineteen ninety-nine):** A test is a procedure in which a sample of an individual's behavior is obtained, evaluated, and scored using standardized methods.

332.2 Types of Tests

1. **Teacher-Made Tests**
    - Designed by teachers for classroom evaluation.
    - Can be **oral or written**.
    - Cover limited subject areas and are specific to teaching needs.
    - Example: A short classroom quiz or a unit test prepared by a teacher.
2. **Standardized Tests**
    - Developed by experts with **established norms** (average scores).
    - Administered under **uniform conditions** across many students.
    - Used for large-scale assessment and comparison.
    - Example: National Achievement Survey, SAT, or standardized aptitude tests.

332.3 Importance of Testing

(a) **For Teachers:**

- Helps identify what students **can and cannot do**.
- Reveals **effectiveness of teaching methods**.
- Provides data for **future lesson planning**.

(b) **For Students:**

- Shows **learning progress** and areas for improvement.
- Encourages **seriousness towards learning**.
- Acts as a **motivational tool** by setting measurable goals.

332.4 Educational Perspective

Testing is one **form of assessment**, focusing on **specific samples of learning behavior**.
It is **not a complete picture** of learning but an **indicator** of performance at a particular time.
Effective evaluation combines testing with other methods like **observation**, **assignments**, and **projects** to assess holistic learning.

333. Measurement and Assessment
(Short Notes)

333.1 Measurement – Meaning and Concept

Definition:
Measurement refers to the process of **assigning numbers to objects, events, or performances according to certain rules**, in order to represent the **quantity of an attribute**.
As **Nunnally** stated, *"Measurement consists of rules for assigning numbers to objects in such a way as to represent quantities of attributes."*
Similarly, *The Dictionary of Education (nineteen eighty-one)* defines measurement as *"assigning numbers to attributes in such a way that the numbers represent the quantity of that attribute."*

Educational Context:

- Measurement in education **quantifies student performance**, usually through marks or scores.
- It tells **"how much"** of a certain ability or knowledge is present but **not the full nature** of that learning.
- For example, if a student scores seventy-five marks in Language, it only tells about achievement in a test — not about reading habits, creativity, or participation.

Examples:

1. Measuring a student's score in a mathematics test (quantitative).
2. Assigning grades based on marks obtained.
3. Using a scale to record attendance rate or task completion.
4. Comparing rainfall, body weight, or exam marks — all are examples of assigning numerical value.

Key Properties of Measurement (A. K. Singh):
(a) Numbers are assigned to tasks **according to definite rules**.
(b) It measures **attributes**, not the object itself.
(c) It involves **quantification** — determining *how much* of a quality is present.

Limitations:

- Marks do not always reflect the **true learning or effort** of students.
- **Qualitative traits** like curiosity, interest, or creativity cannot be measured precisely.
- Teacher-made tests often rely on **subjective judgment**.

333.2 Assessment – Meaning and Concept

Definition:
Assessment is the **systematic process of collecting, analyzing, and using information** (both qualitative and quantitative) to understand and improve learning or performance.
According to **AERA, APA, & NCME (nineteen ninety-nine):**
Assessment is any systematic procedure for collecting information to make inferences about characteristics of people or objects.

Key Characteristics:

- It is a **continuous and interactive** process.
- Involves two roles:
    - **Assessor:** The person who evaluates.
    - **Assessee:** The person being evaluated.
- Focuses on identifying **strengths, weaknesses, and areas of improvement**.
- Involves **setting goals**, **gathering data**, and **using results** for better learning outcomes.

Examples in Education:

1. Diagnosing students' spelling errors in Class V.
2. Identifying reading difficulties or comprehension gaps.
3. Evaluating performance in science experiments.
4. Collecting feedback on student participation in classroom activities.

Purpose:

- To **enhance learning** and guide teaching methods.
- To **identify specific learning problems**.
- To make **informed decisions** about students' progress.

Summary:
Measurement focuses on **quantifying performance**, while assessment includes both **qualitative and quantitative judgments** aimed at **improving learning**.

334. Types of Assessment, Evaluation, and Comparison of Core Concepts
(Short Notes)

334.1 Types of Assessment

(a) Formative Assessment

- The term was first introduced by **Scriven (nineteen sixty-seven)** and later expanded by **Bloom (nineteen sixty-nine)**.
- It refers to the **continuous process of assessing learning during instruction** to provide **feedback and corrective measures**.
- According to **Gronlund**, formative assessment is used to **monitor learning progress** and guide both teachers and students.

- The main purpose is to **improve learning**, not to grade it.

Key Features:

- Conducted **during** teaching-learning.
- Provides **immediate feedback** to improve performance.
- Encourages learning through **experimentation and correction**.
- Results are **not added** to the final grade.

Examples:

1. One-minute essays or quick reflections.
2. Student–teacher conferences.
3. Misconception checks or oral quizzes.
4. Socratic questioning or peer discussions.

(b) Summative Assessment

- Conducted **at the end** of an instructional period.
- Used to determine **how much a student has learned** and to assign grades or marks.
- It is **evaluative**, not diagnostic.
- Helps in **judging achievement**, **program effectiveness**, and **progress**.

Examples:

1. End-of-unit or term exams.
2. Final projects or portfolios.
3. Standardized achievement tests.
4. Board or national-level examinations.

Summary:
Formative assessment supports learning **as it happens**, while summative assessment measures **what has been learned** after instruction.

334.2 Evaluation – Meaning and Characteristics

Definition:
Evaluation is a **systematic process of judging the worth or effectiveness** of something based on evidence and predefined criteria.

- **Ralph Tyler:** Evaluation determines to what extent educational objectives are being realized.
- **C. E. Beeby (nineteen seventy-seven):** It is the systematic collection and interpretation of evidence leading to a judgment of value with a view to action.
- **Wilbur Harris (two thousand nine):** Evaluation is judging worth, desirability, or adequacy according to definite purposes.

Characteristics of Evaluation:
(a) **Continuous Process:** Goes hand in hand with teaching and learning.
(b) **Comprehensive:** Covers all aspects—intellectual, emotional, social, and physical.
(c) **Child-Centered:** Focuses on the learner's development and participation.
(d) **Remedial Value:** Guides corrective actions for improvement.
(e) **Cooperative in Nature:** Involves teachers, students, and parents.
(f) **Common Practice:** A regular feature for measuring overall growth.

Steps of Evaluation (Harris, nineteen sixty-eight):

1. Decide what to evaluate.
2. Determine the purpose of evaluation.
3. Set criteria or standards.
4. Collect data or observations.
5. Compare data with standards.
6. Draw conclusions and make decisions.

334.3 Comparing Testing, Measurement, Assessment, and Evaluation

Testing:

- A tool or method to collect information about performance.
- Quantifies specific learning outcomes through exams or tasks.

Measurement:

- Assigns **numerical values** to performance or attributes.
- Provides **quantitative data** (e.g., marks, grades).

Assessment:

- Involves both **qualitative and quantitative** analysis of learning.
- Aims to **improve learning** through feedback and reflection.
- Includes tests, observations, interviews, and records.

Evaluation:

- **Comprehensive judgment process** that includes both measurement and assessment.
- Determines the **value, success, or failure** of learning outcomes.
- Focuses on whether **objectives have been achieved**.

Key Distinctions:

- **Measurement** gives a quantitative description.
- **Assessment** provides a qualitative understanding.
- **Evaluation** combines both and adds **value judgment**.
- **Testing** is one technique within assessment.

Standards:

- Measurement standards are **absolute** (focus on precision).
- Evaluation standards are **comparative** (focus on better or worse outcomes).

Summary:
Assessment gathers evidence; evaluation **uses** that evidence for making decisions.
Measurement assigns **numbers**; testing is the **tool** to gather that data.
Together, they ensure a complete picture of learning and achievement.

335. Differences among Investigation, Auditing, Monitoring, and Evaluation

335.1 Investigation – Meaning and Purpose

- **Definition:** Investigation is a **formal and systematic inquiry** into a problem, event, or statement to **discover the truth**.
- It involves both **information gathering (tasks)** and **analytical reasoning (thinking)**.
- The process is guided by questions such as:
    - What is to be investigated?
    - What results are expected?
    - What resources are available?
    - What constraints exist?

Purpose:
To collect evidence and **establish facts** about a situation, irregularity, or claim.

Examples:

1. Investigating a case of data misuse in an institution.
2. Researching academic malpractice.
3. Probing irregularities in record-keeping.
4. Studying reasons for poor student outcomes.

335.2 Auditing – Meaning and Purpose

- **Definition:** Auditing is a **systematic evaluation of systems, processes, or records** to ensure **accuracy, compliance, and efficiency**.
- It checks whether actions and outcomes **follow established guidelines or standards**.
- **Types:** Financial audit, academic audit, administrative audit, or quality audit.

Features:

- Conducted by **qualified professionals**.
- Focuses on **compliance and control**.
- Ensures **reliability** of data and use of resources.
- Can be **internal** (by the institution) or **external** (by an outside agency).

Examples:

1. Financial audit by a chartered accountant.
2. Academic audit for accreditation.
3. Resource audit to evaluate institutional efficiency.

Special Note:
In education, an "audit course" means attending a class **without evaluation or grading**—learning for self-enrichment.

335.3 Monitoring – Meaning and Purpose

- **Definition:** Monitoring is a **continuous and systematic observation** of ongoing activities or projects to ensure that they are **on track and meeting objectives**.
- It starts with project implementation and continues until completion.
- Focuses on **inputs, processes, and short-term outputs**.

Functions:

- Tracks **progress and resource utilization**.
- Identifies **problems early** for corrective action.
- Provides **real-time feedback** to managers or policymakers.

Common Areas Monitored:
(a) Activities and progress reports
(b) Budget and expenditure
(c) Supplies and logistics
(d) Documentation and data management

Examples:

1. Regular review of school attendance records.
2. Tracking budget utilization in educational projects.
3. Monitoring teacher performance and student participation.

335.4 Evaluation – Meaning and Purpose

- **Definition:** Evaluation is a **systematic judgment of the value or effectiveness** of an activity, project, or system, based on collected evidence.
- It is **broader** than monitoring, as it looks at **outcomes, results, and long-term impact**.
- Focuses on **learning, improvement, and decision-making**.

Examples:

1. Evaluating the success of an educational reform policy.
2. Assessing the impact of teacher training programs.
3. Reviewing curriculum changes after a pilot period.

335.5 Key Differences among Investigation, Auditing, Monitoring, and Evaluation

1. Purpose:

- **Investigation:** To discover truth or prove a fact.
- **Auditing:** To verify compliance and accuracy.
- **Monitoring:** To track ongoing progress.
- **Evaluation:** To judge value, effectiveness, and outcomes.

2. Scope:

- **Investigation:** Focused and specific.
- **Auditing:** Broad but procedural.
- **Monitoring:** Continuous and operational.
- **Evaluation:** Comprehensive and outcome based.

3. Duration:

- **Investigation:** No fixed time; may cover several years.
- **Auditing:** Done periodically (e.g., yearly).
- **Monitoring:** Ongoing throughout implementation.
- **Evaluation:** Usually conducted at the end or mid-term.

4. Nature of Work:

- **Investigation:** Analytical and diagnostic.
- **Auditing:** Verification and compliance oriented.
- **Monitoring:** Observational and managerial.
- **Evaluation:** Judgmental and decision oriented.

5. Relationship:

- **Monitoring** feeds data for **evaluation**.
- **Auditing** ensures systems are functioning properly.
- **Investigation** occurs when irregularities or deviations are suspected.
- **Evaluation** provides overall judgment for improvement and planning.

336. Principles and Areas of Evaluation
(Short Notes)

336.1 Principles of Evaluation

(a) Principle of Continuity
Evaluation is a **continuous process**, carried out throughout the teaching-learning period.
It helps teachers regularly check learners' progress and enables students to build a stronger command over their learning.
Example: Daily class tests, oral questioning, and regular feedback.

(b) Principle of Comprehensiveness
Evaluation should cover **all aspects of the learner's personality**—intellectual, emotional, social, and physical.
Example: Assessing both academic performance and co-curricular participation.

(c) Principle of Objectives
Evaluation must be directly based on the **educational objectives**.
It should reveal whether the intended learning outcomes and behavioral changes have been achieved.
Example: Testing if the student can apply a concept rather than just recall it.

(d) Principle of Learning Experience
Evaluation should include both **curricular and co-curricular activities**, as both contribute to holistic learning.
Example: Assessing teamwork in group projects or participation in school events.

(e) Principle of Broadness
Evaluation must be **broad in scope**, encompassing multiple dimensions of student life—knowledge, skills, attitudes, and values.

(f) Principle of Application
Learning should be **applicable in real-life situations**. Evaluation checks whether students can **use their knowledge and skills** effectively.
Example: Problem-solving tasks, real-life case studies, or situational applications.

Supporting Guidelines for Effective Evaluation:
• Clearly define **what is to be evaluated**.
• Choose techniques suitable to the **purpose of evaluation**.
• Use **multiple tools** for comprehensive assessment.
• Ensure **standardization** of tools and criteria.
• Maintain alignment between **objectives, instruction, and evaluation**.
• Remember that evaluation is a **means to an end**, not the end itself.

336.2 Areas of Evaluation

Evaluation in schools aims to develop both **cognitive** and **non-cognitive** capacities of students.
It must include **formative** (continuous) and **summative** (final) evaluation for balanced judgment of learning.

(a) Scholastic Evaluation

- Related to **intellectual and academic activities**—subjects, assignments, projects, and examinations.
- Focuses on the **cognitive domain**, as defined by Bloom's Taxonomy (nineteen fifty-six).

Bloom's Cognitive Domain (1956):

1. **Knowledge:** Recall of facts and concepts.
2. **Comprehension:** Understanding and interpreting ideas.
3. **Application:** Using knowledge in new situations.
4. **Analysis:** Breaking information into parts and examining relationships.
5. **Synthesis:** Combining ideas to form a new whole.
6. **Evaluation:** Making judgments based on set criteria.

Anderson and Krathwohl's Revised Taxonomy (two thousand):

1. **Remembering** – Retrieving knowledge from memory.
2. **Understanding** – Constructing meaning from messages.
3. **Applying** – Executing or using procedures.
4. **Analyzing** – Breaking material into parts and understanding relationships.
5. **Evaluating** – Making judgments through checking and critiquing.
6. **Creating** – Generating new ideas or structures.

Example of Scholastic Evaluation:
Unit tests, written assignments, practical work, projects, and presentations.

(b) Non-Scholastic (Co-Scholastic) Evaluation

- Focuses on **social, emotional, moral, and physical development**.
- Includes qualities like cooperation, discipline, leadership, empathy, and participation in activities.
- Aims at **all-round development** rather than only academic achievement.

Example of Non-Scholastic Evaluation:
Assessment of behavior, participation in sports or cultural activities, and social responsibility projects.

336.3 Importance of Both Forms (As per NCERT)

- **Formative Evaluation:** Conducted during instruction to improve learning, identify weaknesses, and provide remedial support.
- **Summative Evaluation:** Conducted at the end of the session to classify, promote, or predict future performance.
- **Reference Methods:**
    1. **Self-Referenced:** Comparing learner's current performance with their past.
    2. **Criterion-Referenced:** Comparing performance against set learning goals.
    3. **Norm-Referenced:** Comparing performance with peer group averages.

337. Non-Scholastic / Co-Scholastic Evaluation and Continuous and Comprehensive Evaluation (CCE)
(Short Notes)

337.1 Understanding Non-Scholastic / Co-Scholastic Evaluation

Meaning and Essence:
non-scholastic or co-scholastic evaluation focuses on **holistic development** — the growth of learners beyond academics.
It emphasizes **creativity, emotional balance, moral values, physical fitness, and social participation**, all of which are essential for a complete personality.

As **J. Krishnamurti** stated, *education should help a learner understand the whole of life — physical, emotional, mental, and spiritual — not just its fragments.*

Hence, evaluation should capture both **academic (scholastic)** and **personal (non-scholastic)** aspects of learning.

Why Non-Scholastic Evaluation?
According to **NCERT**, children learn best through **play, exploration, and multi-sensory experiences**. They learn not only in classrooms but also through **peer interaction, group work, and trial-and-error experiences**.
Therefore, non-scholastic evaluation values areas that build life skills, creativity, cooperation, and responsibility.

Core Areas of Co-Scholastic Evaluation:

1. **Life Skills:** Problem-solving, critical thinking, decision-making, empathy, communication.
2. **Attitudes and Values:** Towards self, peers, teachers, environment, and nation.
3. **Co-Curricular Activities:** Art, music, dance, drama, debates, quizzes, social work.
4. **Health and Physical Education:** Games, sports, yoga, and overall fitness.
5. **Work Education:** Participation in socially useful productive work (SUPW).

Key Features:

- Focus on **behavioral changes** and personal development.
- Evaluation through **observation, participation, and performance**, not marks.
- Grading often done **collaboratively** by class teachers and activity teachers.
- Aims to create a **democratic, inclusive, and joyful learning environment**.

Examples:

1. Group projects or environmental campaigns.
2. Participation in cultural programs or debates.
3. Volunteer work or leadership in school events.
4. Peer interaction and conflict resolution.

337.2 Continuous and Comprehensive Evaluation (CCE)

Meaning:
CCE is a system of evaluation that ensures assessment of **both scholastic and non-scholastic areas** on a **continuous** and **comprehensive** basis.
Introduced by **NCERT (two thousand nineteen guidelines)**, it aims to track each learner's progress **holistically** over time.

Purpose of CCE:
(a) To assess the **change in learning and development** over a period of time.
(b) To map progress across different curricular areas.
(c) To identify the **individual support** each child needs.
(d) To help children **self-assess** and reflect on their learning.
(e) To find out **how far learning outcomes** have been achieved.
(f) To guide teachers in **improving instructional strategies**.
(g) To provide **evidence-based feedback** to parents and guardians.

Nature of CCE:

- It is **integrated** with the teaching-learning process.
- It is **not an external activity** after a topic or term.
- Focuses on **individual progress**, not comparison.
- Avoids grades and marks; uses **descriptive feedback** instead.

Key Components of a CCE Report (as per NCERT):
• Conducted **quarterly or periodically** as decided by school authorities.
• Based on **multiple sources of evidence** collected systematically.
• Focused on **criterion-referenced evaluation** — comparing performance with learning outcomes, not with peers.
• Uses **developmental scales**, such as:

- *Needs a lot of support*
- *Can improve with guidance*
- *Performs at expected level*
  • Recognizes and supports **high-performing learners** with enrichment opportunities.
  • Avoids labels like "slow" or "poor"; uses **constructive, positive feedback**.
  • Maintains **stage-wise report cards** (e.g., one for primary, another for upper primary).
  • Tracks **progress across stages** for continuity in learning.

Example:
A student's progress in teamwork, discipline, creativity, and health activities is recorded every quarter, along with remarks on how to improve — instead of giving grades or marks.

337.3 Essence of Co-Scholastic and CCE Integration

- Co-scholastic evaluation ensures **all-round development**, nurturing not just the mind but the body and spirit.
- CCE ensures this development is **tracked continuously** and **supported systematically**.
- Together, they make education **child-centered, growth-oriented, and inclusive**.

In simple terms:

- *Scholastic evaluation measures what a child knows.*
- *Co-scholastic evaluation measures what a child becomes.*
- *CCE ensures both are nurtured together, continuously and holistically.*

338. The Evolution of Functions of Evaluation
(Short Notes)

338.1 Evolutionary Background

Over time, **evaluation** has evolved from a limited, test-based process into a **multidimensional discipline** that combines measurement, understanding, accountability, and decision-making.
Initially, evaluation was rooted in **positivism**—focusing on objectivity, measurement, and standardized testing. Later, with the rise of **constructivism and realism**, it expanded to include **context, interpretation, and human experience**.

Today, evaluation functions as both a **scientific and reflective process**, balancing quantitative data with qualitative understanding.

338.2 Phase One: Measurement / Comparison / Transparency / Accountability

Early Focus:
In its early stages, evaluation emphasized **measurement** and **comparison** — assigning numbers to performance and comparing outcomes among learners or programs. The main goal was to maintain **objectivity** and **standardization**.

Functions in the Early Stage:
(a) Discover learners' potential and aptitudes.
(b) Predict future success.
(c) Aid students in **selection and placement**.
(d) Promote students to the next level.
(e) Appraise **teaching and supervision practices**.
(f) Compare performances across groups.
(g) Plan for **improvement in instruction and policy**.

Shift Toward Accountability:
With time, evaluation began serving as a **tool for transparency and accountability** in education and governance.
Accountability became a way to **justify actions, ensure responsibility**, and **promote ethical and effective resource use**.

Key Elements of Accountability:

- Taking ownership of results and actions.
- Setting clear expectations.
- Admitting and correcting mistakes.
- Providing timely feedback.
- Acting as a good steward of institutional resources.
- Monitoring progress efficiently.

Example:
Using school performance data to evaluate teacher effectiveness and ensure fair use of educational funds.

338.3 Phase Two: Understanding / Learning / Decision-Making / Positive Accountability

As evaluation matured, its focus expanded from **measurement and control** to **learning, understanding, and improvement**.
It became a **collaborative and reflective process**, guiding both institutional growth and individual development.

Modern Functions of Evaluation:
(a) Helps teachers design suitable **methods and techniques** of teaching.
(b) Supports formulation and reformulation of **realistic objectives**.
(c) Improves curriculum and instructional quality.
(d) Assesses the **achievement of learning objectives**.
(e) Enhances teaching strategies and teacher effectiveness.

(f) Motivates and guides students through **feedback and recognition**.
(g) Encourages participation, curiosity, and intrinsic motivation.

Evaluation for Decision-Making:
Evaluation now supports **rational and evidence-based decisions** in education, policy, and management. It aids in choosing between alternatives and learning from outcomes.

Decision-Making Tools Used in Evaluation:

1. **Pro-and-con analysis:** Weighing advantages and disadvantages.
2. **Decision tree:** Visualizing possible choices, outcomes, and probabilities.
3. **Influence diagram:** Mapping decision factors and interconnections.
4. **Utility assignment:** Measuring relative importance or value of choices.

Qualities of a Good Decision Maker:

- Identifies multiple alternatives before acting.
- Avoids cognitive bias through peer consultation.
- Uses data-driven insights rather than assumptions.
- Reflects on outcomes for continual improvement.

338.4 Positive Accountability – The Modern Ideal

Definition:
Positive accountability is a forward-looking form of responsibility where individuals and organizations **plan proactively**, **collaborate transparently**, and **work collectively** toward shared success—rather than reacting to failures afterward.

Characteristics:
(a) Plans ahead and mobilizes resources efficiently.
(b) Admits and corrects mistakes while helping others learn from them.
(c) Shares information openly and supports team success.
(d) Sets ambitious yet achievable goals.
(e) Handles stress effectively and maintains stability under pressure.
(f) Encourages innovation and resource optimization.
(g) Works collectively to enhance organizational performance.

Example:
A school that regularly reviews teaching methods, anticipates challenges, and involves teachers, parents, and students in continuous improvement rather than waiting for external audits or failures.

338.5 Summary of Evolutionary Stages

Stage	Core Focus	Key Function	Orientation
Early Stage	Measurement & Comparison	Quantitative assessment of learning	Objective / Positivist
Transitional Stage	Transparency & Accountability	Ensuring reliability and responsible use of resources	Administrative
Modern Stage	Understanding, Learning, Decision-Making	Improving learning and program quality	Reflective / Constructivist

Current Stage	Positive Accountability	Proactive collaboration, innovation, and shared responsibility	Developmental / Holistic

In essence:
Evaluation has moved from **measuring outcomes** to **understanding processes**, from **judging performance** to **enhancing growth**, and from **imposing accountability** to **cultivating positive responsibility**.

Practice Multiple Choice Questions

1. What is the primary role of a teacher, as analyzed by the meaning of *Teaching* provided in the sources?
A) An authority figure who dictates information.
B) A facilitator who tries to satisfy the educational needs of the learners.
C) A model who seeks only pre-decided ends.
D) A systematic executor of sequential teaching patterns.
Correct Answer: B) A facilitator who tries to satisfy the educational needs of the learners.

2. Elliot Eisner, in his book *The Educational Imagination* (nineteen eighty-five), gives four reasons to consider teaching as an art. Which of the following is one of those reasons?
A) The approach to teach is based on scientific inquiry and logical sequencing.
B) The objectives are fixed beforehand to bring about desired behavioral changes.
C) The end of teaching is not pre-decided; it is often created in the process.
D) Teaching must always be impersonal in its approach.
Correct Answer: C) The end of teaching is not pre-decided; it is often created in the process.

3. The origin of the belief that teaching is a *science* can be found largely due to the widespread influence of which figure's writings in the second half of the twentieth century?
A) Carl Rogers
B) Elliot Eisner
C) John Dewey
D) Johann Friedrich Herbart
Correct Answer: D) Johann Friedrich Herbart

4. According to the sources, the final achievement level of the *affective domain* is often reached rarely in classroom teaching. This level is known as:
A) Comprehensiveness
B) Generalization
C) Characterization
D) Application
Correct Answer: C) Characterization

5. Which definition of *Learning* states that it "is selecting the appropriate response and connecting it with the stimulus"?
A) Guilford
B) Skinner
C) Thorndike
D) Garret
Correct Answer: C) Thorndike

6. *Pedagogy* is defined in the sources as the discipline concerned with which aspects of education?
A) Only the practical application.
B) Only the transmission of content knowledge.
C) Theory as well as the practical aspect of education.
D) Only instructional theory.
Correct Answer: C) Theory as well as the practical aspect of education.

7. What is the primary difference highlighted between *Teaching* and *Instruction* regarding their timeline?
A) Instruction involves cognitive gain, while teaching involves affective gain.
B) Teaching involves logical planning, while instruction is heuristic.

C) Teaching begins its journey much before it comes into action in the classroom, whereas instruction begins only when the teacher enters the classroom.
D) Instruction is the stimulation of learning, while teaching is the guidance of learning.
Correct Answer: C) Teaching begins its journey much before it comes into action in the classroom, whereas instruction begins only when the teacher enters the classroom.

8. Which of Thornton B. Paul's three basic teaching styles allows learners the freedom to decide how to work to ensure success in performing their task, with the teacher acting mainly as a supervisor?
A) The directing style
B) The discussing style
C) The delegating style
D) The dynamic style
Correct Answer: C) The delegating style

9. What aspect is defined as the *axis* of any teaching model, representing the main objective for whom it is to be used?
A) Syntax
B) Social System
C) Focus
D) Principle of Sensation
Correct Answer: C) Focus

10. Which model of teaching, given by *Carl Rogers*, believes in the concept of human relations and is similar to the discussion style of teaching?
A) Social Inquiry model
B) Direct model
C) Programmed model
D) Non-directive model
Correct Answer: D) Non-directive model

11. The teaching method described as "moving from specific to general" is the:
A) Deductive method
B) Synthetic method
C) Analytic method
D) Inductive method
Correct Answer: D) Inductive method

12. According to *Philip Jackson's* division of teaching operations, the phase where the teacher provides verbal stimulation, makes explanations, asks questions, and provides guidance is the:
A) Pre-active Phase
B) Post-active Phase
C) Interactive Phase
D) Transactional Phase
Correct Answer: C) Interactive Phase

13. Which maxim of teaching is based on the principles of associative psychology, moving from known elements to a whole concept (e.g., studying cell, then tissues, then organs)?
A) Simple to complex
B) Analysis to synthesis
C) Empirical to rational

D) Whole to part
Correct Answer: B) Analysis to synthesis

14. According to *Hokanson and Hooper*, at which level of teaching does the learner first receive information, with the teacher giving answers and responses, representing a one-way communication?
A) Level-I: Reception
B) Level-II: Application
C) Level-III: Extension
D) Level-IV: Creation
Correct Answer: A) Level-I: Reception

15. Which level of teaching, according to *Hokanson and Hooper*, signifies that the learner is able to solve a problem in his own way and tries to find multiple solutions to complex problems?
A) Application
B) Extension
C) Creation
D) Challenge
Correct Answer: C) Creation

16. What quality of an effective teacher, as stated by *Wong (two thousand nine)*, is reflected in a lesson plan showing positive expectations for success?
A) Knowing how to design lessons for mastery.
B) Having positive expectations for learner's success.
C) Being an extremely good classroom manager.
D) Providing good time management.
Correct Answer: B) Having positive expectations for learner's success.

17. Which term describes the planning that provides an overview of the course in the curriculum, indicating the units to be taught and the time to be devoted?
A) Unit Planning
B) Lesson Planning
C) Annual Planning
D) Concept Mapping
Correct Answer: C) Annual Planning

18. What characteristic of a successful lesson plan, according to *McCutcheon (nineteen eighty)*, ensures that new class material relates to earlier material?
A) Each minute of the class and role of learners are planned.
B) The lecture is designed to engage active participants.
C) Important points are repeated multiple times.
D) New material relationships build a foundation for learning.
Correct Answer: D) New material relationships build a foundation for learning.

19. What is the fundamental focus of the *Behaviourist Lesson Planning* approach?
A) Free will and internal influences.
B) Stimulus-response relationship in learning and behavior.
C) The process through which learning takes place.
D) Higher-order thinking for large classes.
Correct Answer: B) Stimulus-response relationship in learning and behavior.

20. Which phase in the *5-E Constructivist Lesson Planning Model* is defined by the activities of attracting learners' interest, revealing prior knowledge, and focusing thinking?
A) Explore
B) Engage
C) Explain
D) Elaborate
Correct Answer: B) Engage

21. In the *5-E Constructivist Lesson Planning Model*, the phase where formal terms, definitions, and explanations for concepts are typically introduced is:
A) Engage
B) Explore
C) Explain
D) Evaluate
Correct Answer: C) Explain

22. According to *Novak and Canas (two thousand eight)*, what graphical tool for organizing and representing knowledge includes concepts enclosed in circles or boxes and relationships indicated by linking words on connecting lines?
A) 5-E Model
B) Annual Plan
C) Concept Map
D) Behaviourist Plan
Correct Answer: C) Concept Map

23. Which basic consideration for selecting an instructional method emphasizes that subjects like science require methods (like inquiry or problem solving) to verify or discover knowledge?
A) Learners
B) Grade Level of the Learners
C) Subject Matter
D) Learning Environments
Correct Answer: C) Subject Matter

24. Which teacher-centered method is known for primarily involving an oral presentation by the teacher, and is generally applicable to learners who are studying in higher grades and above average?
A) Demonstration Method
B) Lecture Method
C) Team Teaching
D) Inquiry Approach
Correct Answer: B) Lecture Method

25. A key disadvantage of the *Lecture Method* is that it is often seen as a one-way communication, resulting in learners being primarily:
A) Active participants
B) Self-directed learners
C) Passive recipients (or passive listeners)
D) Critical analysts
Correct Answer: C) Passive recipients (or passive listeners)

26. In the *Team Teaching* method, which characteristic ensures that teachers work together and share in planning, organizing, teaching, evaluation, and course improvement?

A) Autonomy to teachers
B) Joint responsibilities (or Cooperative teaching)
C) Pooling of resources
D) Specific competencies
Correct Answer: B) Joint responsibilities (or Cooperative teaching)

27. What scientific method of instruction, whose credit often goes to *John Dewey*, involves identifying problems, posing questions, and seeking answers, and requires a high level of interaction among the learner, teacher, study area, resources, and environment?
A) Problem Solving
B) Demonstration Method
C) Inquiry Approach
D) Lecture-cum-Demonstration
Correct Answer: C) Inquiry Approach

28. In the *Inquiry Based Learning* framework (*Pedaste et al., two thousand fifteen*), which phase includes the sub-phases of questioning and hypothesis generation?
A) Orientation
B) Investigation
C) Conclusion
D) Conceptualization
Correct Answer: D) Conceptualization

29. What type of resource is defined as physical objects that can be directly bought, adjusted, and measured, such as textbooks and blackboards?
A) Compound Resources
B) Abstract Resources
C) Complex Resources
D) Simple Resources
Correct Answer: D) Simple Resources

30. What term refers to an act of using alternative resources to facilitate instruction for teaching wherever there is lack or specific first-hand teaching aids, often using local resources to build, construct, or mold materials?
A) ICT integration
B) Team teaching
C) Improvisation
D) Concept mapping
Correct Answer: C) Improvisation

31. What is the primary goal of effective classroom management?
A) Reduction of misbehaviour.
B) Establishment of order and control.
C) Promoting learner learning.
D) Minimizing teacher effort.
Correct Answer: C) Promoting learner learning.

32. Which principle of classroom management suggests that the teacher should solicit opinions, try to achieve group consensus, and provide equal opportunity to every learner to participate?
A) Principle of Clarity and Mastery over content
B) Principle of self control

C) Principle of democratic behaviour
D) Principle of flexibility
Correct Answer: C) Principle of democratic behaviour

33. What is the amount of time a learner spends performing relevant academic tasks with a high level of success, where the tasks are directly relevant to an academic outcome?
A) Allocated time
B) Engaged time
C) Available time
D) Academic learning time (ALT)
Correct Answer: D) Academic learning time (ALT)

34. In managing behavioral problems, which strategy involves observing that a problem is occurring and redirecting the learner to some fruitful activities?
A) Corrective Measures (e.g., making learners aware of consequences)
B) Preventive Measures (e.g., reinforcing good behavior)
C) Extinction and Redirection (Supportive Measure)
D) Replacement Skills
Correct Answer: C) Extinction and Redirection (Supportive Measure)

35. What seating arrangement style is specifically noted to make the classroom interactive and encourage every learner's participation in the teaching-learning process?
A) Traditional rows and columns
B) The 'T-zone' arrangement
C) Semicircle seating formation
D) Individual desk arrangement
Correct Answer: C) Semicircle seating formation

36. Who defines *Pedagogy* as involving "the organic relation between curriculum and teaching, and it entails study based, socially just and ethically sound practices resulting from negotiations among the teacher, learners and others"?
A) Johann Friedrich Herbart
B) John Dewey
C) Elliot Eisner
D) Carl Rogers
Correct Answer: B) John Dewey.

37. Which of the following is NOT one of the five elements suggested by *Herbart* for Pedagogy, aiming to develop the learner as an ideal citizen?
A) Preparation
B) Presentation
C) Sensation
D) Association
Correct Answer: C) Sensation. (The elements listed are Preparation, Presentation, Association, Generalization, and Application).

38. Which teaching style, suggested by *Thornton, B. Paul (two thousand thirteen)*, encourages learners' creativity and thought process by giving them freedom of speech and an open environment to discuss their points?
A) The directing style
B) The delegating style

C) The dynamic style
D) The discussing style
Correct Answer: D) The discussing style.

39. In the context of teaching models, what is defined as the organized sequence of all the dimensions of the model?
A) Focus
B) Social System
C) Syntax
D) Principle of Sensation
Correct Answer: C) Syntax.

40. Which teaching model, given by *John Dewey* and *Herbart Thelim*, is cited as a source of social interactivity that involves working in a group with varied personalities?
A) Social Inquiry model
B) Non-directive model
C) Group investigation model
D) Direct model
Correct Answer: C) Group investigation model.

41. The maxim of teaching that involves starting with an overall idea or concept (the whole) and then breaking it down into smaller, understandable units (parts) is known as:
A) Particular to general
B) Whole to part
C) Empirical to rational
D) Known to unknown
Correct Answer: B) Whole to part.

42. Which phase of teaching, according to *Philip Jackson*, involves the activities a teacher performs after the teaching process is complete, such as evaluation and determining the effectiveness of techniques used?
A) Pre-active Phase
B) Interactive Phase
C) Post-active Phase
D) Transactional Phase
Correct Answer: C) Post-active Phase.

43. According to the considerations for instructional planning, a positive psychological environment must satisfy which basic psychological needs of learners?
A) Attention, Comprehension, and Retention
B) Safety, belonging, autonomy, and competence
C) Academic achievement and self-reliance
D) Physical comfort and social connection
Correct Answer: B) Safety, belonging, autonomy, and competence.

44. In the *5-E Constructivist Lesson Planning* model, which phase involves the learners getting directly involved with phenomena and materials, building a common base of experiences, while the teacher acts as a facilitator providing materials?
A) Engage
B) Explore
C) Explain

D) Elaborate
Correct Answer: B) Explore.

45. Which step in the *Behaviourist Lesson Planning* approach involves the teacher demonstrating a graphic form or showing examples of the desired behavior for learners to imitate?
A) Input
B) Guided Practice
C) Anticipatory Set
D) Modelling
Correct Answer: D) Modelling.

46. Which characteristic of a successful lesson plan, according to *McCutcheon (nineteen eighty)*, ensures that the lecture is designed to actively involve learners?
A) Each minute of the class and role of learners are planned.
B) The lecture is designed to engage active participants.
C) New material relationships build a foundation for learning.
D) Important points are repeated multiple times.
Correct Answer: B) The lecture is designed to engage active participants.

47. According to the *Inquiry Based Learning* framework (*Pedaste et al., two thousand fifteen*), the phase of includes which two sub-phases?
A) Observation and Data Interpretation
B) Questioning and Hypothesis Generation
C) Exploration and Experimentation
D) Communication and Reflection
Correct Answer: B) Questioning and Hypothesis Generation.

48. In the *Inquiry Based Learning* framework (*Pedaste et al., two thousand fifteen*), *Investigation* is the phase where the learner starts searching for solutions. It includes which three sub-phases?
A) Orientation, Conceptualization, and Discussion
B) Questioning, Hypothesis Generation, and Exploration
C) Exploration, Experimentation, and Data Interpretation
D) Analysis, Verification, and Conclusion
Correct Answer: C) Exploration, Experimentation, and Data Interpretation.

49. What cooperative group activity requires learners to become "experts" on one aspect of a topic and then share their expertise with members of a newly formed heterogeneous group to complete the "puzzle" of knowledge?
A) Snowball groups/pyramids
B) Circle of Voices
C) Think–Pair–Share
D) Jigsaw
Correct Answer: D) Jigsaw.

50. Which type of resource, according to *Grubb (two thousand eight)*'s classification of classroom resources, includes items that are NOT easily bought, measured, or adjusted, such as "instructional approaches and teaching philosophies"?
A) Simple Resources
B) Compound Resources
C) Complex Resources

D) Abstract Resources
Correct Answer: C) Complex Resources.

51. Which principle of classroom management suggests that the teacher should accommodate learners' ideas and be ready to make necessary changes in teaching-learning activities based on the requirement of the prevailing situation?
A) Principle of Clarity and Mastery over content
B) Principle of democratic behaviour
C) Principle of self control
D) Principle of flexibility
Correct Answer: D) Principle of flexibility.

52. In time management, the time assigned for instruction in a content area, which teachers often vary widely in how they use, is referred to as:
A) Available time
B) Academic learning time (ALT)
C) Engaged time
D) Allotted time
Correct Answer: D) Allotted time.

53. In time management, which term refers to the amount of time a learner spends actively involved in learning tasks (like writing or responding) but specifically excludes non-instructional activities like disruptive talk or daydreaming?
A) Allocated time
B) Engaged time
C) Academic Learning Time (ALT)
D) Transition time
Correct Answer: B) Engaged time.

54. In managing behavioral problems, which strategy involves making provisions for choice of activities, varying the pace of teaching, and including activities learners can accomplish with the help of parents or peers?
A) Extinction and Redirection (Supportive)
B) Corrective Measures
C) Curricular Adaptation (Supportive)
D) Reinforcing good behaviour (Preventive)
Correct Answer: C) Curricular Adaptation (Supportive).

55. When working in an inclusive classroom, what planning method is advised, which simply means a design that is easily interchangeable in different formats (like readable fonts for screen reading software) to suit different kinds of learners?
A) 5-E Approach
B) Behaviourist Planning
C) Universal Design of Learning (UDL)
D) Concept Mapping
Correct Answer: C) Universal Design of Learning (UDL).

56. According to *Elliot Eisner (nineteen eighty-five)*, which of the following is one of the four reasons to consider teaching as an art?
A) Teaching must strictly follow scientific inquiry.
B) The end of teaching is always pre-decided to ensure accountability.

C) Teaching is often created in the process, meaning the end is not pre-decided.
D) Teaching must be systematic, logically planned, and executed.
Correct Answer: C) Teaching is often created in the process, meaning the end is not pre-decided.

57. Which element is cited by *Herbart* as essential for Pedagogy, aiming to develop the learner as an ideal citizen?
A) Sensation
B) Instruction
C) Association
D) Evaluation
Correct Answer: C) Association. (The suggested five elements are Preparation, Presentation, Association, Generalization, and Application).

58. Who defined learning as "an organization of behaviour"?
A) Skinner
B) Thorndike
C) Guilford
D) Garret
Correct Answer: D) Garret.

59. Who defined teaching as "the stimulation, guidance, direction and encouragement of learning"?
A) John Dewey
B) Burtan
C) Carl Rogers
D) Robert Gagne
Correct Answer: B) Burtan.

60. Which phase in the *5-E Constructivist Lesson Planning Model* is the starting point where learners first encounter and identify the instructional task?
A) Elaborate
B) Evaluate
C) Engage
D) Explore
Correct Answer: C) Engage.

61. What is the fundamental focus of the *Analytic Method* of teaching?
A) Moving from specific examples to general rules.
B) Moving from known facts to unknown conclusions.
C) Moving from a conclusion to a hypothesis, or unknown to known.
D) Moving from a whole concept to its individual parts.
Correct Answer: C) Moving from a conclusion to a hypothesis, or unknown to known.

62. Which consideration for instructional planning emphasizes that a positive psychological environment must satisfy the learners' basic needs for safety, belonging, autonomy, and competence?
A) Available Resources
B) Subject Matter
C) Psychological Environment
D) Physical Environment
Correct Answer: C) Psychological Environment.

63. What is the primary characteristic of the Teaching Style known as *The Directing Style*?
A) Learners decide how to work independently.
B) It is instructional-based, with the teacher guiding the whole process.
C) It focuses on discussion and critical thinking.
D) It relies heavily on self-awareness and creativity.
Correct Answer: B) It is instructional-based, with the teacher guiding the whole process.

64. Which phase of teaching, according to *Philip Jackson*, involves the teacher being in the classroom and providing verbal stimulation, explanations, and guidance?
A) Pre-active Phase
B) Interactive Phase
C) Post-active Phase
D) Transactional Phase
Correct Answer: B) Interactive Phase.

65. Which step is the third in the typical eight steps used for the development of *Behaviouristic Lesson Planning*?
A) Input
B) Anticipatory Set (Focus)
C) Purpose or Objective
D) Modelling
Correct Answer: C) Purpose or Objective. (This step is related to learning outcomes, including behavioral changes).

66. What is the amount of time assigned for instruction in a content area, which teachers often vary widely in how they use?
A) Available time
B) Allotted time
C) Engaged time
D) Academic learning time (ALT)
Correct Answer: B) Allotted time.

67. In the context of the *Problem Solving* method of instruction, what technique is used at the second step ("Analyze the Problem") to identify the origin or primary cause of a problem?
A) Brainstorming
B) Root Cause Analysis (RCA)
C) Hypothesis Framing
D) Inductive Inquiry
Correct Answer: B) Root Cause Analysis (RCA).

68. The Latin root of the word *lecture*, *lectus*, originally meant:
A) That which is heard.
B) That which is spoken.
C) That which is written.
D) That which is read.
Correct Answer: D) That which is read.

69. Which principle of classroom management suggests that the teacher should accommodate learners' ideas, plans, and observations and be ready to make necessary changes in teaching-learning activities?
A) Principle of democratic behaviour
B) Principle of clarity and mastery over content

C) Principle of self control
D) Principle of flexibility
Correct Answer: D) Principle of flexibility.

70. The Chinese proverb, *"What I hear, I forget; what I see, I remember; and what I do, I understand,"* is used to emphasize the importance of:
A) Teacher ability.
B) Teaching-learning resources.
C) Pacing curriculum and lesson.
D) Democratic behaviour.
Correct Answer: B) Teaching-learning resources.

71. Which supportive measure for managing behavioral problems involves observing that a learner is showing a problematic behavior for attention and trying to avoid acknowledging it?
A) Corrective Consequences
B) Extinction
C) Replacement Skills
D) Curricular Adaptation
Correct Answer: B) Extinction.

72. What term refers to the rate at which progress is made through the curriculum, ensuring that the content is covered or completed?
A) Lesson pacing
B) Transition time
C) Curriculum pacing
D) Allotted time
Correct Answer: C) Curriculum pacing.

73. According to *Grubb (two thousand eight)*'s classification of classroom resources, which category includes instructional approaches and teaching philosophies?
A) Simple Resources
B) Abstract Resources
C) Compound Resources
D) Complex Resources
Correct Answer: D) Complex Resources.

74. Which *Cooperative Learning* activity requires learners to develop expertise on one sub-topic and then share that knowledge with members of a newly formed group to complete the assignment?
A) Think–Pair–Share
B) Circle of Voices
C) Fishbowl
D) Jigsaw
Correct Answer: D) Jigsaw.

75. According to the *Inquiry Based Learning* framework (*Pedaste et al., two thousand fifteen*), the phase of *Investigation* includes exploration, experimentation, and:
A) Questioning
B) Hypothesis Generation
C) Data Interpretation
D) Reflection
Correct Answer: C) Data Interpretation.

76. The formal teaching process is primarily possible in which environment, according to the introduction of Unit eight?
A) Family members
B) Society
C) Educational institution
D) Mother
Correct Answer: C) Educational institution

77. Who defined learning as "the change in behaviour resulting from behaviour"?
A) Skinner
B) Thorndike
C) Guilford
D) Garret
Correct Answer: C) Guilford

78. The final achievement level mentioned in the affective domain, which is rarely reached in classroom teaching, is:
A) Receiving
B) Valuing
C) Characterization
D) Responding
Correct Answer: C) Characterization

79. The origin of the belief that teaching is a ‘science’ is largely attributed to the widespread influence of the writings of which figure in the second half of the twentieth century?
A) Elliot Eisner
B) Carl Rogers
C) Johann Friedrich Herbart
D) John Dewey
Correct Answer: C) Johann Friedrich Herbart

80. Which definition states that learning "is a process of progressive behaviour adaption"?
A) Guilford
B) Thorndike
C) Skinner
D) Garret
Correct Answer: C) Skinner

81. Who stated that teaching is "the stimulation, guidance, direction and encouragement of learning"?
A) Burtan
B) Robert Gagne
C) John Dewey
D) Herbart
Correct Answer: A) Burtan

82. The first step in Dashiell’s process of learning is:
A) Setting the objectives
B) Receiving motivation
C) Revision and mastery
D) The rise of need and necessity in the learner
Correct Answer: D) The rise of need and necessity in the learner

83. Elliot Eisner's reason for teaching being an art, stating that it is a heuristic or adventitious activity, means that it:
A) follows strict routines.
B) seeks emergent ends (the end is not pre-decided).
C) is impersonal.
D) is systematic.
Correct Answer: B) seeks emergent ends (the end is not pre-decided)

84. The maxim of teaching that involves starting with observable, real experiences and moving toward theoretical, sensible content is:
A) Known to unknown
B) Concrete to abstract
C) Empirical to rational
D) Particular to general
Correct Answer: C) Empirical to rational

85. Which component of a teaching model represents the organization of all the model's dimensions?
A) Focus
B) Syntax
C) Social System
D) Support System
Correct Answer: B) Syntax

86. The Programmed teaching model, which uses programmed instruction style like CAI (computer assisted instruction), was first given by:
A) John Dewey
B) Carl Rogers
C) B.F. Skinner
D) J. Bruner
Correct Answer: C) B.F. Skinner

87. Which teaching method is defined by moving from a conclusion (unknown) to a hypothesis (known), or breaking down a complex problem into smaller units to understand it better?
A) Synthetic method
B) Deductive method
C) Inductive method
D) Analytic method
Correct Answer: D) Analytic method

88. Which phase of teaching, according to Jackson, involves the teacher assessing the effectiveness of the teaching and techniques used?
A) Pre-active Phase
B) Interactive Phase
C) Post-active Phase
D) Transactional Phase
Correct Answer: C) Post-active Phase

89. Which maxim of teaching is followed when the content is arranged primarily based on the learner's psychology (e.g., interest and ability) and then introduced logically?
A) Empirical to rational
B) Analysis to synthesis

C) Simple to complex
D) Psychological to logical
Correct Answer: D) Psychological to logical

90. The concept of action–reaction maintained to create a bond between teacher and learner is represented by which fundamental of teaching models?
A) Focus
B) Syntax
C) Principle of Sensation
D) Social System
Correct Answer: C) Principle of Sensation

91. Which style of teaching, according to Thornton, B. Paul (two thousand thirteen), encourages critical analysis and discussion, with the teacher acting as a facilitator providing immense opportunity for learners to think?
A) The directing style
B) The delegating style
C) The dynamic style
D) The discussing style
Correct Answer: D) The discussing style

92. The teaching style characterized by providing learners the authority to decide how to work to ensure success in performing allocated, independent assignments is:
A) The directing style
B) The delegating style
C) The dynamic style
D) The discussing style
Correct Answer: B) The delegating style

93. Who gave the Non-directive model of teaching, which is based on the concept of human relations and is similar to the discussion style?
A) Carl Rogers
B) John Dewey
C) B.F. Skinner
D) Jerome Bruner
Correct Answer: A) Carl Rogers

94. Which maxim of teaching proceeds from known facts to unknown conclusions?
A) Analytic method
B) Whole to part
C) Synthetic method
D) Inductive method
Correct Answer: C) Synthetic method

95. The teacher has a moral responsibility not to avoid learners' inquisitiveness related to issues like sex, attraction, drugs, stress, abuse, suicide, and bribery, but instead should arrange workshops on:
A) academic subjects.
B) life-skills.
C) career guidance.
D) professional ethics.
Correct Answer: B) life-skills

96. The teaching method credited to Prof. H.E. Armstrong, emphasizing that the soul of science learning is exploration, is the:
A) Demonstration method
B) Problem solving method
C) Heuristic/discovery method
D) Project method
Correct Answer: C) Heuristic/discovery method

97. According to Hokanson and Hooper, the level of teaching characterized by one-way communication from teacher to learner, where the learner is there to receive information, is:
A) Level-I: Reception
B) Level-II: Application
C) Level-III: Extension
D) Level-IV: Creation
Correct Answer: A) Level-I: Reception

98. The goal of the maxim "Whole to part" is to teach a content or topic by first presenting it as a whole and then:
A) moving from known to unknown.
B) breaking it into small units and dealing with them.
C) using only inductive reasoning.
D) moving from concrete to abstract.
Correct Answer: B) breaking it into small units and dealing with them

99. The phase of teaching that involves the teacher setting goals, analyzing content, and preparing strategies (styles, models, methods) before entering the classroom is the:
A) Post-active Phase
B) Interactive Phase
C) Transactional Phase
D) Pre-active Phase
Correct Answer: D) Pre-active Phase

100. In the Interactive Phase of teaching, what must the teacher perform first?
A) Utilize proper method and techniques to present content.
B) Establish a connection with the learners.
C) Have a quick glance and overview of the class.
D) Provide verbal stimulation and guidance.
Correct Answer: C) Have a quick glance and overview of the class

101. Who stated that effective teachers must have positive expectations for learner's success and be extremely good classroom managers, which is reflected in their lesson plans?
A) Tyler (nineteen forty-nine)
B) McCutcheon (nineteen eighty)
C) Wong (two thousand nine)
D) Clark (nineteen eighty-three)
Correct Answer: C) Wong (two thousand nine)

102. Which type of planning provides an overview of the course in the curriculum and indicates the units to be taught along with the time to be devoted?
A) Unit Planning
B) Lesson Planning

C) Annual Planning (Yearly Plan)
D) Constructivist Planning
Correct Answer: C) Annual Planning (Yearly Plan)

103. Which is defined as a systematic arrangement of subject matter, covering an entire unit of work that may span several days or weeks?
A) Lesson Plan
B) Annual Plan
C) Unit Plan
D) Concept Map
Correct Answer: C) Unit Plan

104. Which characteristic of a successful lesson plan, according to McCutcheon (nineteen eighty), ensures that the lecture is designed to actively involve learners?
A) Each minute of the class is planned.
B) The lecture is designed to engage active participants.
C) Important points are repeated multiple times.
D) New material relationships are pointed out.
Correct Answer: B) The lecture is designed to engage active participants

105. The foundational psychological perspective for Behaviourist Lesson Planning is the focus on the:
A) internal thought processes and moods.
B) free will and reflective practice.
C) stimulus–response relationship in learning and behavior.
D) holistic and socio-cultural context.
Correct Answer: C) stimulus–response relationship in learning and behavior

106. Which step in Behaviourist Lesson Planning involves providing vocabulary, skills, models, and concepts that learners should know?
A) Anticipatory Set
B) Modelling
C) Input
D) Guided Practice
Correct Answer: C) Input

107. Which step in Behaviourist Lesson Planning is a short activity or prompt that focuses the attention of learners before the lesson begins, often called the introduction?
A) Purpose or Objective
B) Input
C) Anticipatory Set (Focus)
D) Closure
Correct Answer: C) Anticipatory Set (Focus)

108. A criticism of Behaviourist Lesson Planning is that it is not appropriate for:
A) small classes.
B) lower classes.
C) language acquisition.
D) higher classes.
Correct Answer: D) higher classes

109. Who stressed the importance of prior knowledge in learning new concepts, influencing the development of Concept Maps?
A) Jean Piaget
B) Jerome Bruner
C) David Ausubel
D) Lev Vygotsky
Correct Answer: C) David Ausubel

110. According to Novak and Canas (two thousand eight), what elements are enclosed in circles or boxes in a Concept Map?
A) Propositions
B) Linking phrases
C) Linking words
D) Concepts
Correct Answer: D) Concepts

111. The five-E Constructivist Lesson Planning Model is based on the theory of learning proposed by which Swiss psychologist?
A) B.F. Skinner
B) Jean Piaget
C) Carl Rogers
D) Joseph Novak
Correct Answer: B) Jean Piaget

112. In the five-E Model, the phase where the teacher primarily acts as a facilitator providing materials while learners engage directly with phenomena and materials is:
A) Engage
B) Explore
C) Explain
D) Elaborate
Correct Answer: B) Explore

113. The phase in the five-E Model where formal terms, definitions, and explanations for concepts are typically introduced is:
A) Engage
B) Explore
C) Explain
D) Elaborate
Correct Answer: C) Explain

114. Universal Design of Learning (UDL) is recommended for inclusive classrooms because it ensures the design is:
A) strictly behaviourist.
B) easily interchangeable in different formats to suit diverse learners.
C) focused solely on cognitive outcomes.
D) teacher-led and systematic.
Correct Answer: B) easily interchangeable in different formats to suit diverse learners

115. Which basic psychological needs of learners must a positive psychological environment satisfy to enhance engagement and commitment to the school?
A) Safety, belonging, autonomy, and competence

B) Attention, retention, and comprehension
C) Physical comfort and intellectual challenge
D) Academic success and social standing
Correct Answer: A) Safety, belonging, autonomy, and competence

116. Which consideration for instructional planning emphasizes that scientific subjects require methods like inquiry or problem solving to verify or discover knowledge?
A) Learners
B) Grade Level of the Learners
C) Subject Matter
D) Learning Environments
Correct Answer: C) Subject Matter

117. Which instructional method is characterized by a primary oral presentation by the teacher, suitable for large classes and covering a vast syllabus in limited time?
A) Demonstration Method
B) Lecture Method
C) Inquiry Approach
D) Problem Solving Method
Correct Answer: B) Lecture Method

118. Which statement represents a key disadvantage of the lecture method?
A) It promotes active discussion and participation.
B) It is often seen as a one-way communication where learners are passive recipients.
C) It allows for flexible course content modification.
D) It is only suitable for small class sizes.
Correct Answer: B) It is often seen as a one-way communication where learners are passive recipients

119. The demonstration method is psychologically sound because it aligns with which maxim of teaching?
A) Simple to complex
B) Known to unknown
C) Concrete to abstract
D) Analysis to synthesis
Correct Answer: C) Concrete to abstract

120. According to R.A. Singer (nineteen sixty-four), the purpose of team teaching is to take advantage of the:
A) administrative ease of scheduling.
B) specific competencies of the team members.
C) autonomy of the individual teacher.
D) pooling of resources only.
Correct Answer: B) specific competencies of the team members

121. Team teaching is also referred to as "cooperative teaching" because teachers share responsibilities in planning, organizing, teaching, evaluation, and:
A) defining learner ability.
B) course improvement.
C) parental reporting.
D) time allocation.
Correct Answer: B) course improvement

122. Which instructional method grew out of the humanistic movement in psychology and focuses on making learners self-directed, self-responsible, and independent?
A) Teacher-centered instruction
B) Behaviorist approach
C) Learner-centered instruction
D) Programmed instruction
Correct Answer: C) Learner-centered instruction

123. The credit for using the Inquiry Approach in teaching, presenting it as an alternative approach to passive learning, goes to:
A) Robert Gagne
B) John Dewey
C) Herbart Thelim
D) Carl Rogers
Correct Answer: B) John Dewey

124. In the Inquiry Based Learning framework (Pedaste et al., two thousand fifteen), the phase that includes exploration, experimentation, and data interpretation is:
A) Orientation
B) Conceptualization
C) Investigation
D) Conclusion
Correct Answer: C) Investigation

125. In the Problem Solving method, the technique used at the analysis stage to find the primary cause of the problem is:
A) Hypothesis Framing
B) Brainstorming
C) Root Cause Analysis (RCA)
D) Data Interpretation
Correct Answer: C) Root Cause Analysis (RCA)

126. The final step in the Problem Solving method is:
A) Implement the solution
B) Select a solution
C) Evaluate the Outcome
D) Generate Alternative Solutions
Correct Answer: C) Evaluate the Outcome

127. Which Cooperative Learning activity involves learners becoming "experts" on one sub-topic and then teaching their expertise to a heterogeneous group to complete the knowledge "puzzle"?
A) Think–Pair–Share
B) Circle of Voices
C) Snowball groups
D) Jigsaw
Correct Answer: D) Jigsaw

128. Which group activity involves progressive doubling (working alone, then in pairs, then in fours) before pooling conclusions in a plenary session?
A) Jigsaw
B) Fishbowl

C) Circle of Voices
D) Snowball groups/pyramids
Correct Answer: D) Snowball groups/pyramids

129. The method of instruction defined as a process where the teacher leads or guides the learners in expressing their opinions and ideas to solve problems collectively is the:
A) Problem Solving Method
B) Demonstration Method
C) Discussion Method
D) Lecture Method
Correct Answer: C) Discussion Method

130. The rules of brainstorming strictly prohibit:
A) questioning the problem definition.
B) combining and improving ideas.
C) criticism of ideas.
D) welcoming unusual ideas.
Correct Answer: C) criticism of ideas

131. The primary focus of using ICT as a "medium" for teaching and learning is:
A) Developing ICT skills for professional purposes.
B) Learning about ICT as an object of study.
C) Enhancing the teaching and learning process.
D) Replacing the teacher entirely.
Correct Answer: C) Enhancing the teaching and learning process

132. According to Grubb (two thousand eight), which resource category includes physical objects that can be directly bought, adjusted, and measured, such as textbooks and blackboards?
A) Abstract Resources
B) Simple Resources
C) Compound Resources
D) Complex Resources
Correct Answer: B) Simple Resources

133. According to Grubb (two thousand eight), which category includes resources that are non-tangible, such as instructional approaches and teaching philosophies?
A) Abstract Resources
B) Simple Resources
C) Compound Resources
D) Complex Resources
Correct Answer: D) Complex Resources

134. Which seating arrangement style is noted to maximize interaction and ensure every learner's participation in the teaching-learning process?
A) Traditional rows and columns
B) The 'T-zone' arrangement
C) Semicircle seating formation
D) Individual desk arrangement
Correct Answer: C) Semicircle seating formation

135. What term is used for the act of using alternative resources, often locally sourced, to facilitate instruction where specific first-hand teaching aids are lacking?
A) ICT Integration
B) Community Sourcing
C) Improvisation
D) Resource Pooling
Correct Answer: C) Improvisation

136. Which of the following is a primary advantage of improvised resources?
A) They are technologically advanced.
B) They are usually cheaper to produce or buy because the raw materials are locally sourced.
C) They require less planning time.
D) They strictly follow traditional methods.
Correct Answer: B) They are usually cheaper to produce or buy because the raw materials are locally sourced

137. In the context of the community as a learning resource, what activity involves learners influencing, changing, or returning to the community in a meaningful way (e.g., through a citizen-action campaign)?
A) Guidance Services
B) Lecture of Guests
C) Instructional Connections
D) Citizen Action
Correct Answer: D) Citizen Action

138. Which criterion for selecting teaching-learning resources emphasizes that the materials should be easily interchangeable in different formats to suit different kinds of learners?
A) Validity
B) Grammatical Correctness
C) Flexibility
D) Complexity
Correct Answer: C) Flexibility

139. The primary aim of effective classroom management is:
A) the reduction of misbehavior.
B) the creation of an orderly environment.
C) promoting learner learning.
D) establishing teacher authority.
Correct Answer: C) promoting learner learning

140. Who suggested that effective classroom management is facilitated if the learners are actively and successfully engaged in instructional activities?
A) Christian (nineteen ninety-one)
B) McNell and Wiles (nineteen ninety)
C) Hofmeister and Lubke (nineteen ninety)
D) Doyle (nineteen eighty-six)
Correct Answer: D) Doyle (nineteen eighty-six)

141. The Principle of Classroom Management that requires the teacher to solicit opinions and try to achieve group consensus, providing equal opportunity for every learner to participate, is the:
A) Principle of Clarity and Mastery over content
B) Principle of Self Control

C) Principle of Democratic Behaviour
D) Principle of Flexibility
Correct Answer: C) Principle of Democratic Behaviour

142. The Principle of Classroom Management that involves the teacher accommodating learners' ideas, plans, and observations and making necessary changes in teaching activities based on the situation is the:
A) Principle of Self Control
B) Principle of Democratic Behaviour
C) Principle of Flexibility
D) Principle of Personal Attributes
Correct Answer: C) Principle of Flexibility

143. The teacher's command over the subject, including thorough knowledge of the curriculum and content, relates to which principle of classroom management?
A) Principle of Flexibility
B) Principle of Clarity and Mastery over content
C) Principle of Involvement
D) Principle of Self Control
Correct Answer: B) Principle of Clarity and Mastery over content

144. Which term refers to the time available for all the activities in school, limited by the number of days and hours in the academic year?
A) Allotted time
B) Engaged time
C) Available time
D) Academic learning time (ALT)
Correct Answer: C) Available time

145. The amount of time assigned for instruction in a specific content area is known as:
A) Available time
B) Allotted time
C) Engaged time
D) Transition time
Correct Answer: B) Allotted time

146. What is the amount of time the learner is actively involved in learning tasks (like writing or responding) but excludes non-instructional activities like disruptive talk or daydreaming?
A) Available time
B) Allotted time
C) Engaged time
D) Academic learning time (ALT)
Correct Answer: C) Engaged time

147. Which term refers to the amount of time a learner spends performing relevant academic tasks, where the tasks are directly relevant to an academic outcome?
A) Allotted time
B) Engaged time
C) Academic learning time (ALT)
D) Curriculum pacing
Correct Answer: C) Academic learning time (ALT)

148. The speed at which progress is made through the curriculum (i.e., the rate at which you cover or complete the curriculum) is known as:
A) Lesson pacing
B) Transition time
C) Curriculum pacing
D) Engaged time
Correct Answer: C) Curriculum pacing

149. The shift or changeover from one instructional activity to another (e.g., moving from lecture to discussion) is called:
A) Curriculum pacing
B) Lesson pacing
C) Transition time
D) Academic learning time (ALT)
Correct Answer: C) Transition time

150. Which classroom management technique involves using a more popular activity (like playing) to reinforce a less popular activity (like learning mathematical concepts)?
A) Learner responsibility technique
B) Group activities technique
C) Behaviour modification technique
D) Skill in maintaining attention
Correct Answer: C) Behaviour modification technique

151. In managing misbehavior, which measure involves observing that a learner is showing a problematic behavior for attention and trying to avoid acknowledging it (ignoring the behavior)?
A) Corrective Measures
B) Extinction
C) Redirection
D) Replacement Skills
Correct Answer: B) Extinction

152. The strategy that involves making provisions for choice of activities or varying the pace of teaching to address problematic behavior caused by instructional methods or task difficulty is:
A) Extinction
B) Curricular Adaptation
C) Corrective Measures
D) Parental Involvement
Correct Answer: B) Curricular Adaptation

153. Making learners aware of the potential consequences of their negative behavior falls under which category of behavioral management?
A) Preventive Measures
B) Supportive Measures
C) Corrective Measures
D) Academic Support
Correct Answer: C) Corrective Measures

154. What is the definition of an inclusive classroom in the broader perspective?
A) A class where only children with disabilities learn.
B) A class where children with and without disability learn together.

C) A class where children from diverse backgrounds (social, cultural, religious, economic, and ability) work together to create knowledge.
D) A class where teacher autonomy is maximized.
Correct Answer: C) A class where children from diverse backgrounds (social, cultural, religious, economic, and ability) work together to create knowledge

155. Which strategy for managing an inclusive classroom advises planning instructions using a design that is easily interchangeable in different formats to suit different kinds of learners?
A) Collaborative Learning
B) Supportive Behaviour
C) Universal Design of Learning (UDL)
D) Variety in Teaching Methods
Correct Answer: C) Universal Design of Learning (UDL)

156. Effective classroom managers described by Evertson and Emmer (nineteen eighty-two) at junior high school level are characterized by teachers who:
A) spend maximum time transitioning between activities.
B) describe rules more completely and implement them more systematically.
C) focus only on punishing undesirable behavior.
D) use ambiguous directions.
Correct Answer: B) describe rules more completely and implement them more systematically

157. The Principle of Classroom Management that requires the teacher to be consistent in classroom behaviour, which helps learners develop self-control, is the:
A) Principle of Flexibility
B) Principle of Self Control
C) Principle of Personal Attributes
D) Principle of Clarity and Mastery
Correct Answer: B) Principle of Self Control

158. The loss of time due to procedural activities such as taking attendance, making announcements, and dealing with off-task behaviors is minimized by increasing which time management variable?
A) Allotted time
B) Engaged time
C) Academic Learning Time (ALT)
D) Transition time
Correct Answer: C) Academic Learning Time (ALT)

159. The teaching style characterized by guidance, verbal stimulation, explanations, and questioning that occurs when the teacher is physically in the classroom is referred to by Jackson as the:
A) Pre-active Phase
B) Interactive Phase
C) Post-active Phase
D) Transactional Phase
Correct Answer: B) Interactive Phase

160. Which teaching method is based on the principle of activity centeredness and takes into account the maxim of teaching from concrete to abstract?
A) Lecture Method
B) Inquiry Approach
C) Demonstration Method

D) Problem Solving Method
Correct Answer: C) Demonstration Method

161. A major disadvantage of the Team Teaching method is the difficulty in maintaining proper team spirit and harmony, and the risk of:
A) reducing allotted time.
B) lack of accountability (one teacher shirking responsibility to others).
C) relying too heavily on lecture method.
D) discouraging bright learners.
Correct Answer: B) lack of accountability (one teacher shirking responsibility to others)

162. Learner-centered instruction is generally characterized by learners selecting content, activities, and experiences according to their:
A) teacher's expectations.
B) pre-fixed curriculum.
C) academic and social needs.
D) parent's guidance.
Correct Answer: C) academic and social needs

163. Inquiry method is often incorporated into instructional processes to engage learners in activities like questioning, discrepant events, inductive activities, deductive activities, and:
A) rote memorization.
B) information gathering.
C) teacher modeling.
D) lecture presentations.
Correct Answer: B) information gathering

164. In the Inquiry Based Learning framework (Pedaste et al., two thousand fifteen), the phase that includes the sub-phases of conceptualization is:
A) Orientation
B) Conceptualization
C) Investigation
D) Conclusion
Correct Answer: B) Conceptualization

165. The term "creativity" is generally associated with what kind of thinking process?
A) Deductive thinking
B) Out of the box thinking
C) Rote repetition
D) Convergent thinking only
Correct Answer: B) Out of the box thinking

166. Discussion method relies on the principle that the knowledge and ideas of several people are more likely to find solutions, aligning with the saying:
A) "What I hear, I forget."
B) "Two good heads are better than one."
C) "Practice makes a man perfect."
D) "Learning is selecting the appropriate response."
Correct Answer: B) "Two good heads are better than one."

167. According to Grubb (two thousand eight), the type of resource that includes instructional approaches and teaching philosophies is classified as:
A) Simple
B) Compound
C) Complex
D) Abstract
Correct Answer: C) Complex

168. The use of ICT and multimedia is noted to break the professional isolation of many teachers by allowing them to connect with colleagues, mentors, universities, and:
A) administrative staff only.
B) sources of teaching materials.
C) parents for monetary gains.
D) private coaching institutes.
Correct Answer: B) sources of teaching materials

169. What quality is required of a teacher in order to effectively manage the classroom and ultimately maximize learner output in terms of performance?
A) Reduced involvement in planning
B) Judicious use of various means and ability to manage various skills
C) Strict authoritarian control
D) Minimizing verbal interaction
Correct Answer: B) Judicious use of various means and ability to manage various skills

170. Which category of time management is considered a more sensitive predictor of achievement than allotted time?
A) Available Time
B) Transition Time
C) Academic Learning Time (ALT) and Engaged Time
D) Curriculum Pacing
Correct Answer: C) Academic Learning Time (ALT) and Engaged Time

171. Who stated that "Learning is selecting the appropriate response and connecting it with the stimulus"?
A) Thorndike
B) Skinner
C) Guilford
D) Garret
Correct Answer: A) Thorndike

172. The final evaluation phase in the five-E Constructivist model views evaluation as a continuous process, resulting in a kind of ongoing inquiry because:
A) learning is deterministic.
B) the curriculum is rigid.
C) questions lead to answers but also more questions, driving instruction.
D) the teacher controls all outcomes.
Correct Answer: C) questions lead to answers but also more questions, driving instruction

173. Which type of planning ensures that each minute of the class and the role of learners are pre-planned?
A) Annual Planning
B) Unit Planning
C) Lesson Planning

D) Concept Mapping
Correct Answer: C) Lesson Planning

174. Which phase of teaching, according to Philip Jackson, involves full proof preparation, scheduling, and fixing the aims and objectives before commencing any action in class?
A) Interactive Phase
B) Post-active Phase
C) Pre-active Phase
D) Transactional Phase
Correct Answer: C) Pre-active Phase

175. The principle of classroom management that states the teacher must avoid being perceived as an unsympathetic adult who will not listen to learners' opinions is the:
A) Principle of Self Control
B) Principle of Involvement
C) Principle of Personal Attributes
D) Principle of Clarity and Mastery
Correct Answer: C) Principle of Personal Attributes

Q.176. What is the primary function of teaching, according to the analysis of the Oxford Dictionary definition?
A) To seek emergent ends.
B) To act as a systematic executor of sequential patterns.
C) To impart knowledge or skill, give instruction or lessons, instill and inspire with.
D) To organize instruction around the objectives set by Herbart.
Correct Answer: Option C – To impart knowledge or skill, give instruction or lessons, instill and inspire with.

Q.177. What characteristic of teaching as an art relates to teachers performing activities dynamically, influenced by various qualities and contingencies?
A) It uses systematic, logically planned execution.
B) Teacher's activities are dynamic i.e. they are influenced by various qualities and contingencies and change accordingly.
C) It allows only pre-decided objectives to be fixed beforehand.
D) It relies heavily on strict routines and regimes.
Correct Answer: Option B – Teacher's activities are dynamic i.e. they are influenced by various qualities and contingencies and change accordingly.

Q.178. What is generally considered the "final achievement" level of the affective domain, though rarely reached in classroom teaching?
A) Generalization.
B) Application.
C) Association.
D) Characterization.
Correct Answer: Option D – Characterization.

Q.179. According to Burtan, teaching is defined as the stimulation, guidance, direction and encouragement of what?
A) Pedagogy.
B) Instruction.
C) Learning.

D) Characterization.
Correct Answer: Option C – Learning.

Q.180. What phase of Dashiell's process of learning occurs when the learner becomes active and shows various actions and reactions?
A) First step (rise of need).
B) Third step (setting objectives).
C) Fifth step (imbibing correct responses).
D) Fourth step (the learner becomes active).
Correct Answer: Option D – Fourth step (the learner becomes active).

Q.181. Which teaching model, given by John Dewey and Herbart Thelim, is cited as a source of social interactivity which includes working in a group consisting of both pro- and anti- type of personalities?
A) Programmed model.
B) Social Inquiry model.
C) Non-directive model.
D) Group investigation model.
Correct Answer: Option D – Group investigation model.

Q.182. Which teaching model focuses on sensory memory, depends on memorization and practice, and includes aspects like learner readiness, motivation, and retention?
A) Bruner’s model.
B) Schuman’s model.
C) Non-directive model.
D) Gagne’s model.
Correct Answer: Option D – Gagne’s model.

Q.183. The creative model of teaching, given by William Gordon, is similar to the delegating style of teaching, with the teacher acting mainly as a:
A) Director.
B) Lecturer.
C) Supervisor.
D) Programmer.
Correct Answer: Option C – Supervisor.

Q.184. What is the orderly and logical arrangement of ideas based on a particular approach, serving as a procedural illustration of systematic and clearly defined steps?
A) Approach.
B) Strategy.
C) Method.
D) Model.
Correct Answer: Option C – Method.

Q.185. Which maxim of teaching suggests moving from known, real, and physical experiences toward immaterial, intangible, and sensible content?
A) Known to unknown.
B) Empirical to rational.
C) Whole to part.
D) Concrete to abstract.
Correct Answer: Option D – Concrete to abstract.

Q.186. The analytic method moves from unknown to known, whereas the synthetic method proceeds from known to unknown. Which one relies primarily on memory?
A) Analytic method.
B) Deductive method.
C) Inductive method.
D) Synthetic method.
Correct Answer: Option D – Synthetic method.

Q.187. According to Hokanson and Hooper, which level of teaching involves the learned content being taken a step further and the gained knowledge being used in a new situation?
A) Level-I: Reception.
B) Level-II: Application.
C) Level-III: Extension.
D) Level-IV: Creation.
Correct Answer: Option C – Level-III: Extension.

Q.188. Which of the following is an example of a positive personal attribute a teacher should display, noted for having a strong bearing on learners' behavior in the classroom?
A) Authoritarian control.
B) Impartiality and distance.
C) Warmth and empathy.
D) Rigidity in instruction.
Correct Answer: Option C – Warmth and empathy.

Q.189. When dealing with issues like sex, attraction, drugs, and stress, teachers have a moral responsibility not to avoid learners' inquisitiveness but should instead arrange workshops on:
A) Content dissemination.
B) Professional ethics.
C) Life-skills.
D) Academic achievement.
Correct Answer: Option C – Life-skills.

Q.190. According to Hawkins et al. (nineteen ninety-nine), when learners find their school environment supportive and caring, they are less likely to become involved in:
A) Academic underachievement.
B) Dropping out of school.
C) Abuse, violence, and other problematic behaviors.
D) Disengagement from co-curricular activities.
Correct Answer: Option C – Abuse, violence, and other problematic behaviors.

Q.191. Which category of classroom climate factors, according to Graetz (two thousand six), may lead to enhanced learning and a powerful, emotional attachment to that space?
A) Socio-economic factors.
B) Built environment.
C) Environment that elicits positive emotional responses.
D) Policies regarding grading and tracking.
Correct Answer: Option C – Environment that elicits positive emotional responses.

Q.192. A positive psychological environment must satisfy which four basic psychological needs of learners for them to become engaged in school?
A) Attention, Retention, Comprehension, and Application.

B) Safety, belonging, autonomy, and competence.
C) Discipline, Rigidity, Conformity, and Obedience.
D) Academic success, Social standing, Financial security, and Physical comfort.
Correct Answer: Option B – Safety, belonging, autonomy, and competence.

Q.193. What type of planning focuses on a systematic arrangement of subject matter, covering an entire unit of work that may span several days or weeks?
A) Annual Planning.
B) Unit Planning.
C) Lesson Planning.
D) Concept Mapping.
Correct Answer: Option B – Unit Planning.

Q.194. According to McCutcheon (nineteen eighty), a successful lesson plan ensures that new material relationships are pointed out to learners, thereby building a:
A) Active participation strategy.
B) Multiple repetition schedule.
C) Foundation for learners' learning.
D) Detailed timeline of instructional procedures.
Correct Answer: Option C – Foundation for learners' learning.

Q.195. In Behaviourist Lesson Planning, what is the step where the teacher leads learners through the necessary steps to perform/get the skill by hearing, looking, and doing?
A) Input.
B) Modelling.
C) Checking for Understanding.
D) Guided Practice.
Correct Answer: Option D – Guided Practice.

Q.196. A major criticism of Behaviourist Lesson Planning is that it fails to explain the through which learning takes place, focusing instead on the target, desirable behavior which is the:
A) Stimulus.
B) Consequence.
C) Product.
D) Free will.
Correct Answer: Option C – Product.

Q.197. In a Concept Map, the linking words or linking phrases specify the relationship between:
A) The overall topic and the concept.
B) The proposition and the label.
C) The two concepts.
D) The previous knowledge and new ideas.
Correct Answer: Option C – The two concepts.

Q.198. The Constructivist Lesson Planning Model (five-E Approach) is based on the theory of learning proposed by which Swiss psychologist?
A) Lev Vygotsky.
B) David Ausubel.
C) Jean Piaget.
D) B.F. Skinner.
Correct Answer: Option C – Jean Piaget.

Q.199. In the five-E Model, which phase allows learners to expand the learned concept and apply their knowledge and understandings to the real world?
A) Engage.
B) Explore.
C) Explain.
D) Elaborate.
Correct Answer: Option D – Elaborate.

Q.200. Which phase of the five-E Model involves teachers acting primarily as a facilitator, providing materials while learners engage directly with phenomena?
A) Engage.
B) Explore.
C) Explain.
D) Evaluate.
Correct Answer: Option B – Explore.

Q.201. The concept of acids and bases in science is scientific in nature. The appropriate approach to select an instructional method would be:
A) Lecture method.
B) Drill and practice method.
C) Demonstration method.
D) Inquiry method or problem solving method.
Correct Answer: Option D – Inquiry method or problem solving method.

Q.202. Which consideration for selecting an instructional method includes teachers' beliefs and behaviors, learners' beliefs and behaviors, and school policies?
A) Subject Matter.
B) Intended Learning Outcomes.
C) Available Resources.
D) Learning Environments.
Correct Answer: Option D – Learning Environments.

Q.203. The Latin root of the word 'lecture,' lectus, originally meant:
A) That which is heard.
B) That which is spoken.
C) That which is read.
D) That which is written.
Correct Answer: Option C – That which is read.

Q.204. A key advantage of the Lecture Method is that the teacher has full control over the transaction of the lesson, ensuring that lectures remain highly:
A) Interactive.
B) Engaging.
C) Consistent.
D) Personal.
Correct Answer: Option C – Consistent.

Q.205. Team teaching is also referred to as "cooperative teaching" because teachers share joint responsibility for planning, organizing, teaching, evaluation, and:
A) Learner grouping.
B) Scheduling activities.

C) Course improvement.
D) Resource allocation.
Correct Answer: Option C – Course improvement.

Q.206. What is a major disadvantage of team teaching related to accountability?
A) It is less flexible in scheduling activities.
B) It requires non-specialized teachers.
C) One teacher can shirk its responsibility to other teachers.
D) It is less effective for bright learners.
Correct Answer: Option C – One teacher can shirk its responsibility to other teachers.

Q.207. Which learner-centered instructional method places the responsibility for meeting needs and achievements of the learner on the learner, helping them become self-directed and independent?
A) Teacher-centered instruction.
B) Learner-centered instruction.
C) Lecture-cum-Demonstration.
D) Direct model of teaching.
Correct Answer: Option B – Learner-centered instruction.

Q.208. Inquiry approach is described as a process driven by questions or problems, emphasizing a self-directed learning approach in which the teacher's role is that of a:
A) Director.
B) Disciplinarian.
C) Facilitator.
D) Lecturer.
Correct Answer: Option C – Facilitator.

Q.209. In the Inquiry Based Learning framework (Pedaste et al., two thousand fifteen), the sub-phases of Questioning and Hypothesis Generation belong to which general phase?
A) Orientation.
B) Investigation.
C) Discussion.
D) Conceptualization.
Correct Answer: Option D – Conceptualization.

Q.210. What is the technique used in the Problem Solving method at the analysis stage (Step II) to find the primary cause of a problem?
A) Hypothesis framing.
B) Brainstorming.
C) Data interpretation.
D) Root Cause Analysis (RCA).
Correct Answer: Option D – Root Cause Analysis (RCA).

Q.211. A core rule of brainstorming strictly states that during the idea generation phase, there should be:
A) Focus on only quality ideas.
B) Immediate selection of the best idea.
C) Reliance on convergent thinking.
D) No criticism of ideas.
Correct Answer: Option D – No criticism of ideas.

Q.212. Which cooperative learning activity involves progressive doubling (working alone, then in pairs, then in fours) before pooling conclusions in a plenary session?
A) Jigsaw.
B) Fishbowl.
C) Circle of Voices.
D) Snowball groups/pyramids.
Correct Answer: Option D – Snowball groups/pyramids.

Q.213. The cooperative approach relies on the principle that the knowledge and ideas of several people are more likely to find solutions, aligning with the saying:
A) "What I hear, I forget".
B) "Learning is selecting the appropriate response".
C) "Two good heads are better than one".
D) "Practice makes a man perfect".
Correct Answer: Option C – "Two good heads are better than one".

Q.214. According to the Chinese proverb cited in the sources, "What I hear, I forget; what I see, I remember and what I do, I..."?
A) Reflect.
B) Analyze.
C) Understand.
D) Practice.
Correct Answer: Option C – Understand.

Q.215. What characteristic of teaching-learning resources, when used, encourages learners to use more than one sense organ, making the learning permanent?
A) Motivation.
B) Helps to develop the proper mental image.
C) Vocabulary increase.
D) Time and money saving.
Correct Answer: Option B – Helps to develop the proper mental image.

Q.216. Which type of teaching-learning resources involve the sense of vision, such as charts, pictures, and models?
A) Audio Teaching-Learning Resources.
B) Audio-Visual Teaching-Learning Resources.
C) Visual Teaching-Learning Resources.
D) Simple Resources.
Correct Answer: Option C – Visual Teaching-Learning Resources.

Q.217. According to Grubb (two thousand eight), which category of classroom resources includes instructional approaches and teaching philosophies, which are difficult to quantify?
A) Simple Resources.
B) Compound Resources.
C) Complex Resources.
D) Abstract Resources.
Correct Answer: Option C – Complex Resources.

Q.218. Which seating arrangement is noted for making the classroom interactive and ensuring every learner's participation?
A) Traditional rows and columns.

B) 'T-zone' arrangement.
C) Individual desk arrangement.
D) Semicircle seating formation.
Correct Answer: Option D – Semicircle seating formation.

Q.219. What is the term for an act of using alternative resources, often locally sourced, to facilitate instruction where specific first-hand teaching aids are lacking?
A) ICT integration.
B) Resource pooling.
C) Collaborative learning.
D) Improvisation.
Correct Answer: Option D – Improvisation.

Q.220. A key advantage of improvised resources is that they are cheaper to produce because the raw materials are:
A) Technologically advanced.
B) Provided by the government.
C) Locally sourced.
D) Internationally standardized.
Correct Answer: Option C – Locally sourced.

Q.221. In teaching and learning, the use of ICT as a "medium" focuses on what primary goal?
A) Learning about ICT as an object of study.
B) Developing ICT skills for professional purposes.
C) Replacing the teacher entirely.
D) Enhancement of the teaching and learning process.
Correct Answer: Option D – Enhancement of the teaching and learning process.

Q.222. Which criterion for selecting teaching-learning resources emphasizes that they should be easily interchangeable in different formats to suit different kinds of learners?
A) Validity.
B) Grammatical Correctness.
C) Flexibility.
D) Focus on core content.
Correct Answer: Option C – Flexibility.

Q.223. Which community-based learning activity involves learners influencing, changing, or returning to the community in a meaningful way (e.g., through a citizen-action campaign)?
A) Guidance Services.
B) Instructional Connections.
C) Community Participation.
D) Citizen Action.
Correct Answer: Option D – Citizen Action.

Q.224. According to Hofmeister and Lubke (nineteen ninety), what is the aim of effective classroom management?
A) Reduction of misbehavior.
B) Establishment of order.
C) Enforcing classroom discipline.
D) Promoting learner learning.
Correct Answer: Option D – Promoting learner learning.

Q.225. Effective classroom management aims to increase engagement in learners, focusing on the creation of a:
A) Disciplinary hierarchy.
B) Stress-free environment.
C) Learning environment.
D) Passive setting.
Correct Answer: Option C – Learning environment.

Q.226. What concept is defined as a teacher's response to learners' misbehavior, and is considered a narrower concept than classroom management?
A) Management.
B) Discipline.
C) Evaluation.
D) Instruction.
Correct Answer: Option B – Discipline.

Q.227. The Principle of Classroom Management that emphasizes that the teacher should accommodate learners' ideas and be ready to make necessary changes in teaching-learning activities based on the prevailing situation is the:
A) Principle of Self Control.
B) Principle of Personal Attributes.
C) Principle of Democratic Behaviour.
D) Principle of Flexibility.
Correct Answer: Option D – Principle of Flexibility.

Q.228. The Principle of Classroom Management that requires the teacher to be firm in classroom behavior, helping learners develop internal control, is the:
A) Principle of Flexibility.
B) Principle of Clarity and Mastery over content.
C) Principle of Self Control.
D) Principle of Involvement.
Correct Answer: Option C – Principle of Self Control.

Q.229. According to Doyle (nineteen eighty-six), effective classroom management is facilitated if learners are actively and successfully engaged in:
A) Group punishment.
B) Self-reflection activities.
C) Instructional activities.
D) Monitoring peer behavior.
Correct Answer: Option C – Instructional activities.

Q.230. The amount of time assigned for instruction in a content area is known as:
A) Available time.
B) Engaged time.
C) Allocated time.
D) Academic learning time (ALT).
Correct Answer: Option C – Allocated time.

Q.231. Which measure of classroom time refers to the amount of time the learner is actively involved in learning tasks, excluding non-instructional activities like disruptive talk?
A) Allotted time.

B) Engaged time.
C) Transition time.
D) Available time.
Correct Answer: Option B – Engaged time.

Q.232. Academic learning time (ALT) is defined as the amount of time a learner spends performing relevant academic tasks with a high level of success, where the tasks are directly relevant to an:
A) Allotted schedule.
B) Transition period.
C) Engaged activity.
D) Academic outcome.
Correct Answer: Option D – Academic outcome.

Q.233. What concept is defined as the rate at which progress is made through the curriculum (covering or completing the syllabus)?
A) Lesson pacing.
B) Engaged time.
C) Curriculum pacing.
D) Transition time.
Correct Answer: Option C – Curriculum pacing.

Q.234. The shift or changeover from one instructional activity to another (e.g., from lecture to discussion) is called:
A) Curriculum pacing.
B) Engaged time.
C) Transition time.
D) Allocated time.
Correct Answer: Option C – Transition time.

Q.235. The management technique based on the assumption that a learner's behavior is the direct result of teacher behavior and can be shaped using reinforcement (as suggested by Skinner) is:
A) Learner responsibility technique.
B) Group activities technique.
C) Behaviour modification technique.
D) Skill in maintaining attention.
Correct Answer: Option C – Behaviour modification technique.

Q.236. Making provisions for choice of activities or varying the pace of teaching to address problematic behavior caused by instructional methods is an example of which supportive measure?
A) Extinction.
B) Corrective Measures.
C) Curricular Adaptation.
D) Replacement Skills.
Correct Answer: Option C – Curricular Adaptation.

Q.237. A classroom where children from diverse backgrounds (social, cultural, religious, economic, and ability) work together to create knowledge is defined as an:
A) Integrated classroom.
B) Mainstream classroom.
C) Inclusive classroom.

D) Pluralistic classroom.
Correct Answer: Option C – Inclusive classroom.

Q.238. The strategy for managing an inclusive classroom that involves planning instructions using a design easily interchangeable in different formats (e.g., readable fonts for screen reading software) is:
A) Collaborative Learning.
B) Variety in Teaching Methods.
C) Universal Design of Learning (UDL).
D) Supportive Behaviour.
Correct Answer: Option C – Universal Design of Learning (UDL).

Q.239. Teachers can manage behavioural problems by observing problematic behavior done for attention and trying to avoid acknowledging it (ignoring the behavior). This supportive measure is called:
A) Redirection.
B) Corrective measure.
C) Extinction.
D) Curricular Adaptation.
Correct Answer: Option C – Extinction.

Q.240. According to Evertson and Emmer (nineteen eighty-two), effective classroom managers at the junior high school level are characterized by teachers who describe rules more completely and implement them more:
A) Flexibly.
B) Subjectively.
C) Systematically.
D) Authoritatively.
Correct Answer: Option C – Systematically.

Q.241. What is the teacher’s primary task during the "Engage" phase of the five-E Constructivist model?
A) To formally introduce definitions.
B) To act as a facilitator providing materials.
C) To grab the learner’s attention.
D) To evaluate mastery of concepts.
Correct Answer: Option C – To grab the learner’s attention.

Q.242. Which teaching method aligns with the maxim "Concrete to abstract," making it psychologically sound because it uses observable activities?
A) Lecture method.
B) Inquiry approach.
C) Demonstration Method.
D) Problem Solving method.
Correct Answer: Option C – Demonstration Method.

Q.243. The method of instruction defined as a process where the teacher leads or guides the learners in expressing their opinions and ideas to solve problems collectively is the:
A) Problem Solving Method.
B) Brainstorming.
C) Discussion Method.
D) Lecture-cum-Demonstration.
Correct Answer: Option C – Discussion Method.

Q.244. What is the total time available for all activities in school, limited by the number of days and hours in the academic year?
A) Allotted time.
B) Engaged time.
C) Available time.
D) Academic learning time (ALT).
Correct Answer: Option C – Available time.

Q.245. What term is used for the loss of time due to procedural activities such as taking attendance, making announcements, and dealing with off-task behaviors?
A) Allocated time.
B) Curriculum pacing.
C) Transition time.
D) Available time.
Correct Answer: Option C – Transition time.

Q.246. What did the Education Commission (nineteen sixty-four to sixty-six) report would do "serious damage to the quality of teaching"?
A) Low teacher salary.
B) Lack of co-curricular activities.
C) Large classes/crowded classrooms.
D) Poor physical environment.
Correct Answer: Option C – Large classes/crowded classrooms.

Q.247. What does the Concept Mapping technique (Novak and Cañas) typically enclose in circles or boxes?
A) Propositions.
B) Linking phrases.
C) Concepts.
D) Ideas.
Correct Answer: Option C – Concepts.

Q.248. In the Interactive Phase of teaching, what activity must the teacher perform first upon entering the classroom?
A) Utilize proper method and techniques.
B) Establish a connection with the learners.
C) Provide verbal stimulation.
D) Have a quick glance and overview of the class.
Correct Answer: Option D – Have a quick glance and overview of the class.

Q.249. In which step of Behaviourist Lesson Planning does the teacher use a variety of questions to evaluate the learners' level of acquisition?
A) Input.
B) Guided Practice.
C) Independent Practice.
D) Checking for Understanding.
Correct Answer: Option D – Checking for Understanding.

Q.250. What characteristic of a successful lesson plan, according to McCutcheon (nineteen eighty), needs to be repeated multiple times within a period and throughout the semester?
A) New material relationships.
B) Role of learners.

C) Important points.
D) Focus of the class.
Correct Answer: Option C – Important points.

Q.251. Which of the following is NOT one of the five required sections of a Unit Plan format, as described by the sources (IGNOU, MES-102)?
A) Introduction.
B) Objectives.
C) Contents.
D) Previous Knowledge/Entry behaviour of Learners.
Correct Answer: Option D – Previous Knowledge/Entry behaviour of Learners (the five required sections are Introduction, Objectives, Contents, Hints for teachers, and Evaluation; Previous knowledge is a separate point).

Q.252. What is the final step in the traditional problem-solving method of instruction?
A) Implement the solution.
B) Select a solution.
C) Generate alternative solutions.
D) Evaluate the Outcome.
Correct Answer: Option D – Evaluate the Outcome.

Q.253. In the Inquiry Based Learning framework (Pedaste et al., two thousand fifteen), the sub-phases of Questioning and Hypothesis Generation belong to which general phase?
A) Orientation.
B) Investigation.
C) Discussion.
D) Conceptualization.
Correct Answer: Option D – Conceptualization.

Q.254. Who defined Pedagogy as involving "the organic relation between curriculum and teaching, and it entails study based, socially just and ethically sound practices"?
A) Johann Friedrich Herbart.
B) John Dewey.
C) Carl Rogers.
D) Elliot Eisner.
Correct Answer: Option B – John Dewey.

Q.255. Who defined learning as "a process of progressive behaviour adaption"?
A) Thorndike.
B) Guilford.
C) Garret.
D) Skinner.
Correct Answer: Option D – Skinner.

Q.256. What maxim of teaching is followed when the teacher starts with the learner's psychology (interest, ability) before introducing content logically?
A) Analysis to synthesis.
B) Empirical to rational.
C) Psychological to logical.
D) Direct to indirect.
Correct Answer: Option C – Psychological to logical.

Q.257. Which resource category, according to Grubb (two thousand eight), includes resources that are difficult to quantify, such as instructional approaches and teaching philosophies?
A) Simple Resources.
B) Compound Resources.
C) Complex Resources.
D) Abstract Resources.
Correct Answer: Option C – Complex Resources.

Q.258. Which cooperative activity involves learners taking turns to share their expertise with members of a newly formed heterogeneous group to complete the "puzzle" of knowledge?
A) Snowball groups/pyramids.
B) Circle of Voices.
C) Fishbowl.
D) Jigsaw.
Correct Answer: Option D – Jigsaw.

Q.259. The Principle of Sensation, one of the fundamentals of teaching models, is concerned with maintaining the concept of action-reaction to create a bond between:
A) Content and objective.
B) Support system and social system.
C) Teacher and learner.
D) Focus and syntax.
Correct Answer: Option C – Teacher and learner.

Q.260. What factor relating to the teacher determines the quality of instruction, including verbal fluency, intellectual competence, and enthusiasm?
A) Instructional clarity.
B) Classroom management techniques.
C) The teacher’s personal style.
D) Subject matter mastery.
Correct Answer: Option C – The teacher’s personal style.

Q.261. Who suggested that effective classroom management is facilitated if the learners are actively and successfully engaged in instructional activities?
A) Wong (two thousand nine).
B) Christian (nineteen ninety-one).
C) Hofmeister and Lubke (nineteen ninety).
D) Doyle (nineteen eighty-six).
Correct Answer: Option D – Doyle (nineteen eighty-six).

Q.262. The planning phase of teaching includes fixing aims and objectives, sequential arrangement of content, and preparation of:
A) Evaluation tools for the Post-active Phase.
B) Verbal stimulation scripts for the Interactive Phase.
C) Strategies (teaching style, model, method, and techniques).
D) Quick overview plans for the classroom.
Correct Answer: Option C – Strategies (teaching style, model, method, and techniques).

Q.263. What criterion for selecting teaching-learning resources emphasizes that materials should be easily interchangeable in different formats to suit different kinds of learners?
A) Validity.

B) Physical quality.
C) Flexibility.
D) Grammatical correctness.
Correct Answer: Option C – Flexibility.

Q.264. What is the first step in Dashiell's process of learning?
A) Receiving motivation.
B) Setting the objectives.
C) The rise of need and necessity in the learner.
D) Showing various actions and reactions.
Correct Answer: Option C – The rise of need and necessity in the learner.

Q.265. What teaching maxim proceeds from known elements to a whole concept (e.g., studying cell, then tissues, then organs)?
A) Psychological to logical.
B) Whole to part.
C) Analysis to synthesis.
D) Empirical to rational.
Correct Answer: Option C – Analysis to synthesis.

Q.266. What is the term for the loss of time when shifting from one instructional activity to another?
A) Allocated time.
B) Curriculum pacing.
C) Transition time.
D) Engaged time.
Correct Answer: Option C – Transition time.

Q.267. Which type of resource is defined as physical objects that can be directly bought, adjusted, and measured, such as textbooks and blackboards?
A) Complex Resources.
B) Abstract Resources.
C) Simple Resources.
D) Compound Resources.
Correct Answer: Option C – Simple Resources.

Q.268. What is defined as a material which the teacher uses to facilitate the learning, understanding, and acquisition of knowledge, concept, principles, or skills by his learners?
A) Curriculum.
B) Assessment tool.
C) Teaching learning resources.
D) Teaching philosophy.
Correct Answer: Option C – Teaching learning resources.

Q.269. What is the primary focus of the learner-centered approach to instruction?
A) Ensuring efficient content transfer.
B) Helping learners become self-directed and independent.
C) Maintaining rigid classroom control.
D) Utilizing only the lecture method.
Correct Answer: Option B – Helping learners become self-directed and independent.

Q.270. The teaching method credited to Prof. H.E. Armstrong, emphasizing that "the soul of the learning of science is exploration," is the:
A) Project method.
B) Problem solving method.
C) Demonstration method.
D) Heuristic/Discovery method.
Correct Answer: Option D – Heuristic/Discovery method.

Q.271. According to Kulsan and Stone, Problem Solving in a scientific sense means some perplexity in the environment or some unexpected or different occurrence which must be:
A) Ignored.
B) Calculated.
C) Explained.
D) Tested only.
Correct Answer: Option C – Explained.

Q.272. What step in Behaviourist Lesson Planning is related to review of the lesson, where the teacher asks assessment questions and tells what learners will learn next?
A) Guided Practice.
B) Independent Practice.
C) Closure.
D) Input.
Correct Answer: Option C – Closure.

Q.273. In the five-E Model, the phase where learners typically share and discuss their own experiences, and formal terms/definitions are introduced, is:
A) Engage.
B) Explore.
C) Explain.
D) Elaborate.
Correct Answer: Option C – Explain.

Q.274. According to R.A. Singer (nineteen sixty-four), team teaching takes advantage of the:
A) Availability of resources.
B) Time saved in planning.
C) Specific competencies of the team members.
D) High class strength.
Correct Answer: Option C – Specific competencies of the team members.

Q.275. What is the term for the speed at which the teacher conducts or teaches individual lessons?
A) Curriculum pacing.
B) Transition time.
C) Lesson pacing.
D) Academic learning time.
Correct Answer: Option C – Lesson pacing.

Q.276. What does the term 'lectus,' the Latin root of 'lecture,' mean?
A) That which is heard.
B) That which is spoken.
C) That which is read.

D) That which is delivered.
Correct Answer: Option C – That which is read.

Q.277. Which teaching maxim is based on the principles of associative psychology, moving from analyzed elements to a synthesized whole?
A) Empirical to rational.
B) Whole to part.
C) Analysis to synthesis.
D) Known to unknown.
Correct Answer: Option C – Analysis to synthesis.

Q.278. What term is defined as the amount of time a learner spends performing relevant academic tasks, directly relevant to an academic outcome?
A) Allotted time.
B) Engaged time.
C) Academic learning time (ALT).
D) Available time.
Correct Answer: Option C – Academic learning time (ALT).

Q.279. Which seating arrangement is noted to negatively affect classroom interaction, with central and front areas (the 'T-zone') getting more teacher attention?
A) Semicircle seating formation.
B) Jigsaw arrangement.
C) Traditional rows and columns.
D) Flexible seating.
Correct Answer: Option C – Traditional rows and columns.

Q.280. Who stated that effective teachers must have positive expectations for learner success and be extremely good classroom managers, reflected in their lesson plans?
A) Clark (nineteen eighty-three).
B) McCutcheon (nineteen eighty).
C) Wong (two thousand nine).
D) Tyler (nineteen forty-nine).
Correct Answer: Option C – Wong (two thousand nine).

Q.281. Which phase of the Inquiry Based Learning framework (Pedaste et al., two thousand fifteen) involves stimulating interest and curiosity, where the major outcome is the identification of variables and defining the problem?
A) Conceptualization.
B) Investigation.
C) Discussion.
D) Orientation.
Correct Answer: Option D – Orientation.

Q.282. Which instructional method involves the teacher presenting specific facts or examples, and the learner reaching a generalized statement?
A) Deductive method.
B) Analytic method.
C) Synthetic method.
D) Inductive method.
Correct Answer: Option D – Inductive method.

Q.283. What method of instruction is most suitable for higher classes where the syllabus is vast and time is limited?
A) Demonstration method.
B) Problem Solving method.
C) Lecture method.
D) Heuristic method.
Correct Answer: Option C – Lecture method.

Q.284. Which maxim of teaching suggests that teaching must move from observable, real, and pragmatic experiences to more balanced and sensible content?
A) Known to unknown.
B) Concrete to abstract.
C) Analysis to synthesis.
D) Empirical to rational.
Correct Answer: Option D – Empirical to rational.

Q.285. The concept map developed by Joseph Novak was influenced by the learning theory of which individual, who stressed the importance of prior knowledge?
A) Jean Piaget.
B) Lev Vygotsky.
C) David Ausubel.
D) Jerome Bruner.
Correct Answer: Option C – David Ausubel.

Q.286. Which measure for managing behavioral problems involves observing problematic behavior done for attention and trying to avoid acknowledging it (ignoring the behavior)?
A) Replacement Skills.
B) Redirection.
C) Extinction.
D) Corrective Consequences.
Correct Answer: Option C – Extinction.

Q.287. What type of planning provides an overview of the course in the curriculum, indicating the units to be taught and the time to be devoted?
A) Lesson Planning.
B) Unit Planning.
C) Annual Planning/Yearly Plan.
D) Constructivist Planning.
Correct Answer: Option C – Annual Planning/Yearly Plan.

Q.288. The teacher’s command over the subject relates to which principle of classroom management?
A) Principle of Flexibility.
B) Principle of Self Control.
C) Principle of Clarity and Mastery over content.
D) Principle of Democratic Behaviour.
Correct Answer: Option C – Principle of Clarity and Mastery over content.

Q.289. According to Philip Jackson, the phase where the teacher fixes aims and objectives and analyzes content before entering the classroom is the:
A) Interactive Phase.
B) Post-active Phase.

C) Pre-active Phase.
D) Transactional Phase.
Correct Answer: Option C – Pre-active Phase.

Q.290. What kind of environment must satisfy the learners' basic psychological needs for safety, belonging, autonomy, and competence?
A) Physical Environment.
B) Socio-economic Environment.
C) Positive Psychological Environment.
D) School Environment.
Correct Answer: Option C – Positive Psychological Environment.

Q.291. Which step in Behaviourist Lesson Planning is a short activity or prompt that focuses the attention of learners before the lesson begins, often called the introduction?
A) Input.
B) Purpose or Objective.
C) Anticipatory Set (Focus).
D) Modelling.
Correct Answer: Option C – Anticipatory Set (Focus).

Q.292. What quality of a teacher, as analyzed by the meaning of "Teaching," positions them as an ideal, model, guide, mentor, and supervisor for learners?
A) Systematic execution of plans.
B) Role of a teacher is full of diversity.
C) Accountability for results.
D) High IQ.
Correct Answer: Option B – Role of a teacher is full of diversity.

Q.293. Who defined planning as “a basic psychological process in which a person visualizes the future, inventories means and ends, and constructs a framework to guide his or her future action”?
A) Wong (two thousand nine).
B) Tyler (nineteen forty-nine).
C) Clark (nineteen eighty-three).
D) McCutcheon (nineteen eighty).
Correct Answer: Option C – Clark (nineteen eighty-three).

Q.294. The final evaluation phase in the five-E Constructivist model is considered cyclical because:
A) The teacher dictates all outcomes.
B) The curriculum is fixed and rigid.
C) Questions lead to answers but also more questions, driving instruction.
D) Learners only assess their own ability.
Correct Answer: Option C – Questions lead to answers but also more questions, driving instruction.

Q.295. According to Grubb (two thousand eight), which resource category includes resources that are difficult to discern and measure, and often embedded in a web of relationships and practices (e.g., collegial decision-making)?
A) Simple Resources.
B) Complex Resources.
C) Compound Resources.
D) Abstract Resources.
Correct Answer: Option D – Abstract Resources.

Q.296. In time management, which concept is considered a more sensitive predictor of achievement than allotted time?
A) Transition time.
B) Available time.
C) Curriculum pacing.
D) Engaged time or Academic learning time (ALT).
Correct Answer: Option D – Engaged time or Academic learning time (ALT).

Q.297. Which type of teaching-learning resources involve both the sense of vision and the sense of hearing, such as television and film projectors?
A) Visual Teaching-Learning Resources.
B) Audio Teaching-Learning Resources.
C) Audio-Visual Teaching-Learning Resources.
D) Complex Resources.
Correct Answer: Option C – Audio-Visual Teaching-Learning Resources.

Q.298. Which principle of classroom management is related to the teacher's command over the subject and ability to properly conceptualize the content?
A) Principle of Self Control.
B) Principle of Involvement.
C) Principle of Clarity and Mastery over content.
D) Principle of Personal Attributes.
Correct Answer: Option C – Principle of Clarity and Mastery over content.

Q.299. What is the term for the speed at which progress is made through the curriculum (i.e., the rate at which content is covered)?
A) Lesson pacing.
B) Engaged time.
C) Curriculum pacing.
D) Transition time.
Correct Answer: Option C – Curriculum pacing.

Q.300. Which supportive measure for managing behavioral problems involves observing that a problem is occurring and redirecting the learner to some fruitful activities?
A) Extinction.
B) Curricular Adaptation.
C) Redirection.
D) Corrective Measures.
Correct Answer: Option C – Redirection.

Q.301. The Problem Solving method often involves using a technique at the analysis stage (Step II) to find the primary cause of the problem. This technique is called:
A) Hypothesis Framing.
B) Brainstorming.
C) Root Cause Analysis (RCA).
D) Data Interpretation.
Correct Answer: Option C – Root Cause Analysis (RCA).

Q.302. What should be avoided in selecting teaching material, especially concerning race, religion, drug misuse, violence, crime, sexual activity, nudity, cruelty, and suicide?
A) Materials lacking creativity.

B) Materials requiring external verification.
C) Controversial or offensive materials.
D) Materials related to real-life experiences.
Correct Answer: Option C – Controversial or offensive materials.

Q.303. What characteristic of effective teaching, according to Wong (two thousand nine), must be reflected in the lesson plan?
A) Flexibility in objectives.
B) Use of only constructivist methods.
C) Positive expectations for learner's success.
D) Detailed description of learner assignments.
Correct Answer: Option C – Positive expectations for learner's success.

Q.304. What type of planning ensures that each minute of the class and the role of learners are pre-planned?
A) Annual Planning.
B) Unit Planning.
C) Lesson planning.
D) Curriculum planning.
Correct Answer: Option C – Lesson planning.

Q.305. Which instructional method is suitable for a classroom of large size wherein a large syllabus is to be covered in limited time?
A) Demonstration Method.
B) Problem Solving Method.
C) Lecture method.
D) Inquiry Approach.
Correct Answer: Option C – Lecture method.

Q.306. What teaching style suggested by Thornton, B. Paul (two thousand thirteen) is primarily instructional-based, with the teacher guiding the whole process?
A) The delegating style.
B) The discussing style.
C) The dynamic style.
D) The directing style.
Correct Answer: Option D – The directing style.

Q.307. Which teaching style encourages learners' creativity and thought process by giving them freedom of speech and an open environment to discuss their points?
A) The directing style.
B) The delegating style.
C) The discussing style.
D) The supervisory style.
Correct Answer: Option C – The discussing style.

Q.308. What type of teaching model (given by Carl Rogers) believes in the concept of human relations and is similar to the discussion style of teaching?
A) Social Inquiry model.
B) Direct model.
C) Programmed model.
D) Non-directive model.
Correct Answer: Option D – Non-directive model.

Q.309. What component of a teaching model is the axis, representing the main objective for whom it is to be used?
A) Syntax.
B) Social System.
C) Focus.
D) Support System.
Correct Answer: Option C – Focus.

Q.310. Which principle of classroom management suggests that the teacher should solicit opinions, try to achieve group consensus, and provide equal opportunity to every learner to participate?
A) Principle of Flexibility.
B) Principle of Self Control.
C) Principle of Democratic Behaviour.
D) Principle of Involvement.
Correct Answer: Option C – Principle of Democratic Behaviour.

Q.311. According to McCutcheon (nineteen eighty), a successful lesson plan ensures that the lecture is designed to engage active:
A) Listeners.
B) Note-takers.
C) Participants.
D) Evaluators.
Correct Answer: Option C – Participants.

Q.312. What type of instruction is characterized by teachers using a variety of behaviors to initiate, nurture, and maintain a facilitative environment?
A) Teacher-centered instruction.
B) Learner-centered instruction.
C) Behaviourist instruction.
D) Programmed instruction.
Correct Answer: Option B – Learner-centered instruction.

Q.313. Which phase of the Inquiry Based Learning framework (Pedaste et al., two thousand fifteen) includes the sub-phases of discussion?
A) Conceptualization.
B) Investigation.
C) Conclusion.
D) Discussion.
Correct Answer: Option D – Discussion.

Q.314. What is the primary purpose of using team teaching in the classroom?
A) To reduce planning time for individual teachers.
B) To minimize the utilization of resources.
C) To take advantage of the specific competencies of the team members.
D) To limit teacher-learner interaction.
Correct Answer: Option C – To take advantage of the specific competencies of the team members.

Q.315. What characteristic of teaching as an art relates to the fact that the end of teaching is often created in the process and is not pre-decided?
A) Systematic approach.
B) Personal touch.

C) Seeking emergent ends.
D) Relying on Kinesics.
Correct Answer: Option C – Seeking emergent ends.

Q.316. Which factor is generally NOT included in the calculation of Academic Learning Time (ALT)?
A) Tasks relevant to academic outcome.
B) High level of success.
C) Procedural activities such as taking attendance.
D) Time spent performing relevant academic tasks.
Correct Answer: Option C – Procedural activities such as taking attendance.

Q.317. What does the term pedagogy elaborate on, concerning education?
A) Only the transmission of content knowledge.
B) Only the final behavioral outcome.
C) How best teaching can occur in a classroom for complete development of the learners.
D) Only instructional theory.
Correct Answer: Option C – How best teaching can occur in a classroom for complete development of the learners.

Q.318. Which method is psychologically sound because it aligns with the maxim "Concrete to abstract"?
A) Lecture Method.
B) Synthetic Method.
C) Demonstration Method.
D) Inductive Method.
Correct Answer: Option C – Demonstration Method.

Q.319. What is the maximum number of members typically found in cooperative groups?
A) Three.
B) Five.
C) Seven.
D) Ten.
Correct Answer: Option C – Seven.

Q.320. What management technique involves the teacher setting expectations and consequences, advocating for self-discipline among the learners?
A) Behaviour modification technique.
B) Group activities technique.
C) Learner responsibility technique.
D) Extinction technique.
Correct Answer: Option C – Learner responsibility technique.

Q.321. What is the term for the organized sequence of all the dimensions of a teaching model?
A) Focus.
B) Syntax.
C) Social System.
D) Principle of Sensation.
Correct Answer: Option B – Syntax.

Q.322. In the five-E Model, the phase where learners make connections between past and present learning experiences and identify the instructional task is the:
A) Explore phase.

B) Explain phase.
C) Elaborate phase.
D) Engage phase.
Correct Answer: Option D – Engage phase.

Q.323. What does the Analytic method move from (conclusion to hypothesis), or break down (complex problem to smaller units)?
A) Known to unknown.
B) Unknown to known.
C) Specific to general.
D) Concrete to abstract.
Correct Answer: Option B – Unknown to known.

Q.324. What aspect of the teacher's aesthetic sense, relating to voice, gestures, facial expression, and body language, adds beauty to the teaching process?
A) Personality.
B) Kinesics.
C) Aptitude.
D) Abstract thinking.
Correct Answer: Option B – Kinesics.

Q.325. Who suggested that teaching is "the stimulation, guidance, direction and encouragement of learning"?
A) Robert Gagne.
B) Thorndike.
C) Burtan.
D) John Dewey.
Correct Answer: Option C – Burtan.

Q.326. The Programmed teaching model, which uses programmed instruction style like CAI (computer assisted Instruction), was first given by:
A) John Dewey.
B) Carl Rogers.
C) B.F. Skinner.
D) Jerome Bruner.
Correct Answer: Option C – B.F. Skinner.

Q.327. What is the fundamental focus of the Behaviourist perspective on learning?
A) Free will and internal influences.
B) Stimulus-response relationship in learning and behavior.
C) The process through which learning takes place.
D) Higher-order thinking for large classes.
Correct Answer: Option B – Stimulus-response relationship in learning and behavior.

Q.328. In the Inquiry Based Learning framework (Pedaste et al., two thousand fifteen), the phase that includes exploration, experimentation, and data interpretation is:
A) Orientation.
B) Conceptualization.
C) Discussion.
D) Investigation.
Correct Answer: Option D – Investigation.

Q.329. The rules of brainstorming strictly prohibit what action regarding ideas?
A) Combining and improving them.
B) Welcoming unusual ideas.
C) Focusing on quantity.
D) Criticism.
Correct Answer: Option D – Criticism.

Q.330. What principle of classroom management relates to the teacher accommodating learners' ideas and making necessary changes based on the prevailing situation?
A) Principle of Self Control.
B) Principle of Democratic Behaviour.
C) Principle of Flexibility.
D) Principle of Clarity and Mastery.
Correct Answer: Option C – Principle of Flexibility.

Q.331. Which maxim of teaching involves starting with an overall idea or concept (the whole) and then breaking it down into smaller, understandable units (parts)?
A) Analysis to synthesis.
B) Psychological to logical.
C) Whole to part.
D) Simple to complex.
Correct Answer: Option C – Whole to part.

Q.332. What is a major disadvantage of the Lecture Method related to learners' engagement?
A) It requires strong public speaking skills from the teacher.
B) Learners become passive recipients/listeners.
C) It is time-consuming for the teacher to prepare.
D) It cannot cover large quantities of new information.
Correct Answer: Option B – Learners become passive recipients/listeners.

Q.333. What is the definition of improvisation in the context of teaching resources?
A) Use of sophisticated ICT tools.
B) Strictly following pre-planned lesson material.
C) Using alternative resources from the immediate environment where specific aids are lacking.
D) Relying only on traditional textbooks.
Correct Answer: Option C – Using alternative resources from the immediate environment where specific aids are lacking.

Q.334. Which phase of teaching, according to Philip Jackson, involves the activities a teacher performs after the teaching process is complete, such as evaluation and determining the effectiveness of techniques used?
A) Pre-active Phase.
B) Interactive Phase.
C) Post-active Phase.
D) Transactional Phase.
Correct Answer: Option C – Post-active Phase.

Q.335. What is the final achievement level mentioned in the affective domain, which is rarely reached in classroom teaching?
A) Valuing.
B) Responding.
C) Receiving.

D) Characterization.
Correct Answer: Option D – Characterization.

Q.336. Which consideration for instructional planning emphasizes that a positive psychological environment must satisfy the learners' basic needs for safety, belonging, autonomy, and competence?
A) Physical Environment.
B) Content.
C) Psychological Environment.
D) School Environment.
Correct Answer: Option C – Psychological Environment.

Q.337. What is the amount of time the learner spends actively involved in learning tasks (like writing or responding) but excludes non-instructional activities?
A) Allocated time.
B) Available time.
C) Engaged time.
D) Transition time.
Correct Answer: Option C – Engaged time.

Q.338. What term refers to a systematic arrangement of subject matter, covering an entire unit of work that may span several days or weeks?
A) Lesson Plan.
B) Annual Plan.
C) Unit Plan.
D) Concept Map.
Correct Answer: Option C – Unit Plan.

Q.339. Which basic consideration for selecting an instructional method emphasizes that subjects like science require methods (like inquiry or problem solving) to verify or discover knowledge?
A) Learners.
B) Grade Level of the Learners.
C) Subject Matter.
D) Intended Learning Outcomes.
Correct Answer: Option C – Subject Matter.

Q.340. What cooperative learning activity requires learners to develop expertise on one sub-topic and then teach their expertise to a newly formed group?
A) Snowball groups.
B) Circle of Voices.
C) Jigsaw.
D) Fishbowl.
Correct Answer: Option C – Jigsaw.

Q.341. What criterion for resource selection ensures that the materials should be easily interchangeable in different formats to suit different kinds of learners?
A) Validity.
B) Grammatical Correctness.
C) Flexibility.
D) Complexity.
Correct Answer: Option C – Flexibility.

Q.342. What supportive measure involves making provisions for choice of activities, varying the pace of teaching, and including activities learners can accomplish with help from others?
A) Extinction.
B) Replacement Skills.
C) Curricular Adaptation.
D) Corrective Measures.
Correct Answer: Option C – Curricular Adaptation.

Q.343. Making learners aware of the potential consequences of their negative behavior falls under which category of behavioral management?
A) Preventive Measures.
B) Supportive Measures.
C) Corrective Measures.
D) Curricular Adaptation.
Correct Answer: Option C – Corrective Measures.

Q.344. What seating arrangement style is specifically noted to make the classroom more interactive and encourage every learner's participation?
A) Traditional rows and columns.
B) Individual desks.
C) The 'T-zone'.
D) Semicircle seating formation.
Correct Answer: Option D – Semicircle seating formation.

Q.345. Which term is used for the concept that emphasizes that the instruction must be designed to be easily interchangeable in different formats to suit different kinds of learners in an inclusive classroom?
A) Collaborative Learning.
B) Cooperative Teaching.
C) Universal Design of Learning (UDL).
D) Variety in Teaching Methods.
Correct Answer: Option C – Universal Design of Learning (UDL).

Q.346. The Demonstration Method is psychologically sound because it takes into account which maxim of teaching?
A) Simple to complex.
B) Known to unknown.
C) Concrete to abstract.
D) Whole to part.
Correct Answer: Option C – Concrete to abstract.

Q.347. Which teaching method involves moving from general rules or statements to specific facts or examples?
A) Inductive method.
B) Analytic method.
C) Deductive method.
D) Synthetic method.
Correct Answer: Option C – Deductive method.

Q.348. Who defined learning as "an organization of behaviour"?
A) Guilford.
B) Skinner.

C) Thorndike.
D) Garret.
Correct Answer: Option D – Garret.

Q.349. What aspect of the lesson plan must be consistent with the teacher being an extremely good classroom manager, according to Wong (two thousand nine)?
A) Designing lessons for mastery.
B) Positive expectations for success.
C) Good time management.
D) Active involvement of participants.
Correct Answer: Option C – Good time management.

Q.350. Who defined 'teaching' as the stimulation, guidance, direction and encouragement of learning?
A) John Dewey.
B) Robert Gagne.
C) Burtan.
D) Carl Rogers.
Correct Answer: Option C – Burtan.

Q.351. Which teaching model believes in the concept of human relations and suggests instructions to be based on this, similar to the discussion style of teaching?
A) Direct model.
B) Programmed model.
C) Non-directive model (Carl Rogers).
D) Group investigation model.
Correct Answer: Option C – Non-directive model (Carl Rogers).

Q.352. What feature of teaching as an art relates to the teacher accepting criticism and appreciation and giving scope for creativity?
A) Teacher's kinesics.
B) Dynamic activities.
C) Aesthetic experience.
D) Flexibility.
Correct Answer: Option D – Flexibility.

Q.353. What type of resources, according to Grubb (two thousand eight), involves the joint use of two or more resources necessary for a better outcome, such as class size reduction and adequate teacher preparation?
A) Simple Resources.
B) Compound Resources.
C) Complex Resources.
D) Abstract Resources.
Correct Answer: Option B – Compound Resources.

Q.354. What community-based learning activity involves experts being invited to the school to deliver lectures and presentations?
A) Community Participation.
B) Citizen Action.
C) Instructional Connections.
D) Lecture of Guests.
Correct Answer: Option D – Lecture of Guests.

Q.355. Who suggested that teaching is systematic, logically planned, and executed in the class, supporting the view of teaching as a science?
A) Elliot Eisner.
B) John Dewey.
C) Johann Friedrich Herbart.
D) Carl Rogers.
Correct Answer: Option C – Johann Friedrich Herbart.

Q.356. What term is defined as the amount of time assigned for instruction in a specific content area?
A) Available time.
B) Engaged time.
C) Allotted time.
D) Academic learning time (ALT).
Correct Answer: Option C – Allotted time.

Q.357. Who defined problem solving as "a set of events in which Human being wants to achieve some goals"?
A) John Dewey.
B) Kulsan and Stone.
C) Gagne.
D) Ausubel.
Correct Answer: Option C – Gagne.

Q.358. What is the primary concern of teachers at the secondary/senior secondary level regarding learners' development?
A) Basic skill acquisition.
B) Intellectual maturity only.
C) Motivating them to assume more responsibility for their behavior.
D) Ensuring high evaluation scores.
Correct Answer: Option C – Motivating them to assume more responsibility for their behavior.

Q.359. What step of Behaviourist Lesson Planning involves the teacher demonstrating a graphic form or showing examples of the desired behavior for learners to imitate?
A) Input.
B) Guided Practice.
C) Modelling.
D) Anticipatory Set.
Correct Answer: Option C – Modelling.

Q.360. What is the term for the technique used in the Problem Solving method to identify the origin or primary cause of a problem at the analysis stage?
A) Hypothesis Framing.
B) Root Cause Analysis (RCA).
C) Brainstorming.
D) Data Interpretation.
Correct Answer: Option B – Root Cause Analysis (RCA).

Q.361. Which level of teaching, according to Hokanson and Hooper, signifies that the learner is able to solve a problem in his own way and tries to find multiple solutions to complex problems?
A) Level-I: Reception.
B) Level-II: Application.

C) Level-III: Extension.
D) Level-IV: Creation.
Correct Answer: Option D – Level-IV: Creation.

Q.362. Which phase of the five-E Model is typically the starting point where learners first encounter and identify the instructional task?
A) Explore.
B) Engage.
C) Explain.
D) Evaluate.
Correct Answer: Option B – Engage.

Q.363. What does the Concept Map include on the connecting line linking two concepts?
A) Concepts.
B) Linking words or linking phrases.
C) Propositions.
D) Ideas.
Correct Answer: Option B – Linking words or linking phrases.

Q.364. What is the primary difference between Teaching and Instruction regarding their timeline?
A) Instruction focuses on content while teaching focuses on behavior.
B) Teaching begins its journey much before it comes into action in the classroom, whereas instruction begins only when the teacher enters the classroom.
C) Teaching is guidance while instruction is motivation.
D) Instruction precedes learning, while teaching follows it.
Correct Answer: Option B – Teaching begins its journey much before it comes into action in the classroom, whereas instruction begins only when the teacher enters the classroom.

Q.365. What should the teacher prepare to be ready for any unexpected situations in class, enhancing his teaching style?
A) Detailed lesson plans for every minute.
B) Rigid adherence to content sequencing.
C) Readiness for any unexpected situations.
D) Relying solely on the directing style.
Correct Answer: Option C – Readiness for any unexpected situations.

Q.366. What is the fundamental focus of the Behaviourist Lesson Planning approach?
A) Higher-order thinking and reflection.
B) Internal cognitive processes.
C) The stimulus-response relationship in learning and behavior.
D) Constructing knowledge based on prior experience.
Correct Answer: Option C – The stimulus-response relationship in learning and behavior.

Q.367. Which phase of Inquiry Based Learning involves the sub-phases of exploration, experimentation, and data interpretation?
A) Conceptualization.
B) Orientation.
C) Discussion.
D) Investigation.
Correct Answer: Option D – Investigation.

Q.368. In time management, which concept is defined as the amount of time a learner spends performing relevant academic tasks, directly relevant to an academic outcome?
A) Allotted time.
B) Engaged time.
C) Academic Learning Time (ALT).
D) Transition time.
Correct Answer: Option C – Academic Learning Time (ALT).

Q.369. What teaching maxim involves starting with observable, real experiences and moving toward theoretical, sensible content?
A) Known to unknown.
B) Analysis to synthesis.
C) Empirical to rational.
D) Psychological to logical.
Correct Answer: Option C – Empirical to rational.

Q.370. Which method works on the principle of activity centeredness and takes into account the maxim of teaching from concrete to abstract?
A) Lecture method.
B) Inquiry approach.
C) Problem solving method.
D) Demonstration Method.
Correct Answer: Option D – Demonstration Method.

Q.371. What seating arrangement style is specifically noted to make the classroom more interactive and encourage every learner's participation?
A) Traditional rows and columns.
B) Individual desks.
C) The 'T-zone'.
D) Semicircle seating formation.
Correct Answer: Option D – Semicircle seating formation.

Q.372. What term refers to a teacher’s detailed description of the course of instruction, or ‘learning trajectory’ for a lesson?
A) Unit Plan.
B) Annual Plan.
C) Lesson plan.
D) Curriculum pacing.
Correct Answer: Option C – Lesson plan.

Q.373. Which principle of classroom management requires the teacher to be firm and consistent in classroom behaviour, which helps learners develop self-control?
A) Principle of Flexibility.
B) Principle of Democratic Behaviour.
C) Principle of Self Control.
D) Principle of Clarity and Mastery.
Correct Answer: Option C – Principle of Self Control.

Q.374. What is the first step in the typical eight steps used for the development of Behaviouristic Lesson Planning?
A) Anticipatory Set (Focus).

B) Input.
C) Modelling.
D) Purpose or Objective.
Correct Answer: Option D – Purpose or Objective.

Q.375. Which approach to teaching states that knowledge is an outcome of inquiry and a resource in further inquiry, credited to John Dewey?
A) Demonstration Method.
B) Lecture Method.
C) Problem Solving.
D) Inquiry Approach.
Correct Answer: Option D – Inquiry Approach.